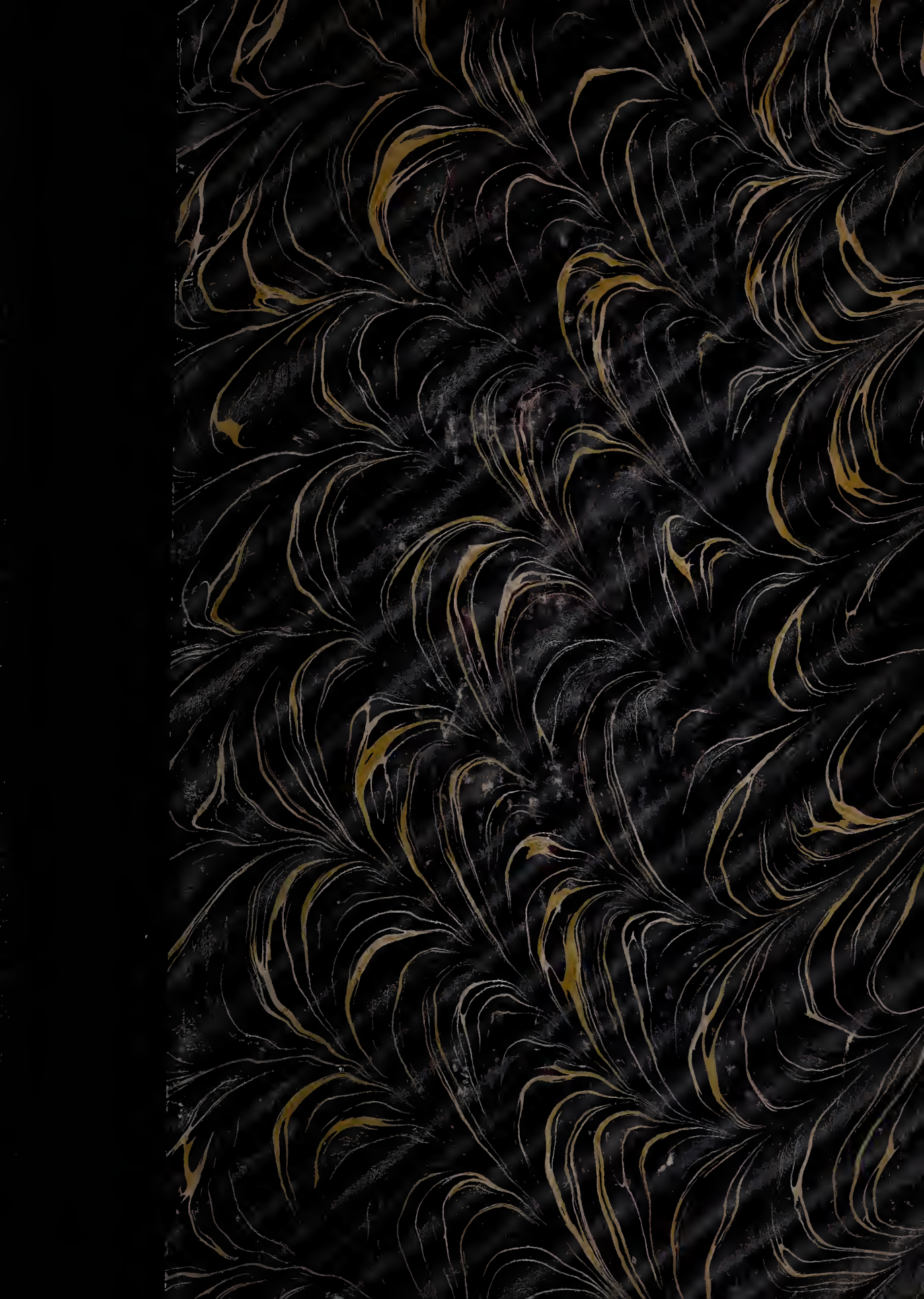

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INFLUENZA: THE MEDICAL ASPECT OF THE PRESENT EPIDEMIC*

BY JOHN G. CROSS, M. D.
MINNEAPOLIS

The outbreak of influenza in the United States this year is a part of a pandemic contagion, the origin of which is as yet very difficult to trace. We are familiar with the recent manifestations of influenza on the Continent of Europe. It has not been established as yet, however, whether the present outbreak originated in Europe, or whether it is a continuation of epidemics which have started farther in the East,—for example, in Asia. It has even been suggested that the Pneumonic Plague of recent years in China may have been the perpetrator of the present outbreak of influenza.

Apart from the great pandemic of 1889-90, influenza has prevailed in a more or less attenuated form in all the civilized communities of the world. It has become more or less familiar, varying in intensity in different years; and, because not usually a very serious disease, it has not attracted very intensive study. It is presumed that there have been other pandemics or epidemics of influenza before the one of 1889-90; at least, in many outbreaks the similarity in cases can be distinctly traced, and this strongly suggests the identity in kind of these epidemics with the recent influenza outbreak.

Some outstanding characters of the present outbreak command attention. In every community attacked the number of cases for the first few days remains small; then it very rapidly rises to the maximum. A few days after the disease has reached this high point, the mortality-rate rises enormously, largely on account of the onset of pneumonia. Then follows a period of rather rapid decline in the number of cases, the mortality-rate still remaining high; and this period is followed by a longer and slower one of gradual waning of the epidemic, during which the mortality-rate tends to become less.

The above history has been repeated in nearly all the communities where influenza has attacked either camps or civil communities of any size. It is now becoming apparent that, in addition to this, we have to figure on a return wave. Minneapolis and St. Paul are just now (Dec. 10, 1918) experiencing this stage of the epidemic. Boston has apparently had a second wave, following the peace celebration of November 11th. It is a rather remarkable fact that, in all the communities attacked, at least in those of any considerable size, such as the larger cities and the large military camps, about the same proportions of individuals have contracted influenza—that is, about one in every twenty persons. It is also noteworthy, in comparison with the epidemic of thirty years ago, that the disease now seems to attack young adults, sparing those past middle age to a very large extent, and also showing a much greater mildness amongst children than it did formerly. The most outstanding feature of all is not the incidence of influenza itself, but the remarkable tendency to the development of a

*Read in a Symposium on Influenza presented before the Minnesota Academy of Medicine, December 11, 1918.

pulmonary condition, which is usually described as bronchopneumonia, since, pathologically, it has the characteristics of that condition.

Taking the statistics of the United States Army, Soper says all camps in the United States show that one in five of all the soldiers had influenza. Of these, one in every six had pneumonia, and of those developing pneumonia two in every five died. The statistics of the civil population are not yet at hand, but the foregoing figures would seem to be fairly accurate for the civil population, as well as for the military,—in other words, the mortality of pneumonia in influenza is about 40 per cent. It is estimated that in the United States, including the military camps, 360,000 deaths have occurred during the present epidemic, nearly all of them due to the bronchopneumonia of influenza. This is a truly appalling figure. In the army camps, conditions apparently favored the rapid spread of the disease, a high pneumonia rate, and severe mortality, so that during the months of September and October 19,429 men died in the United States camps.

While it is as yet impossible to divide cases of influenza into very distinct groups, it seems that there are several fairly well marked types of the disease. There seems to be a very mild form, in which the only manifestation may be fever and weakness if the patient recognizes the condition and goes immediately to bed. This type of trouble is apt to end very promptly in from two to four days with good care and rest. The more common type of trouble, of course, has the usual rather stormy onset,—a chilly feeling, pain, cough, and irritation of the conjunctivæ and, more or less, of the respiratory tract, with or without nose-bleed, and lasting from three to six days with fever. This type of the disease also with good care and early recognition seems to do very well as a rule. There is another and rather more virulent form of the disease, which starts in almost from the first with a more intense toxemia. There are apt to be more nervous disturbances, restlessness, insomnia, intense pain in the head, as well as in the limbs and back, a tendency to hyperpyrexia, delirium, and a rapid respiration not coincident with any demonstrable change in the lungs. This type of the disease is very apt to be fatal. A cyanosis of rapid onset, with failing respiration and heart action, is a common occurrence, in some instances accompanied by acute pulmonary edema. Meningismus is apt to occur, and as far as it is known spinal punctures have invariably been negative, as have blood cultures as well.

The so-called bronchopneumonia of influenza may more often be suspected, when it occurs during the initial attack of fever, by a rise in the respiration-curve, than by the occurrence of any physical signs in the chest. Later, however, signs of consolidation may be made out. Signs are most apt to be found just below the angle of the scapula in the back. Exceptionally, bronchopneumonic areas are discovered in front under the breast or in the apices. In more than nine-tenths of the cases, however, the consolidation will appear first in the back at the point noted. Lobar consolidation is probably very rare. Some cases strongly resemble lobar pneumonia, especially those of confluent bronchopneumonia with a large area of the lung affected.

It is somewhat noteworthy that a disease of the severity of the one under discussion seems to be as free as it is from complications. One occasionally detects a heart murmur, which disappears with convalescence, or before. There is certainly a myocarditis present in some prolonged cases, the degree of which it is yet too early to estimate. This usually gives very little trouble. An albuminuria is occasionally noticed, but apparently not running into a subacute or chronic nephritis.

The gastro-intestinal tract is subject to various disturbances. There are, quite commonly, nausea and sometimes vomiting in the early stages of the trouble. A diarrhea, with or without hemorrhage into the bowel, is by no means infrequent, becoming in some cases a serious complication. The leucocytes are characteristically low, usually increasing with the onset of the more severe pulmonary symptoms. The blood-pressures are almost invariably below normal. The combination on a physical chart of a very moderate pulse-rate (between 90 and 100), a systolic blood-pressure of 90 to 95, with a temperature of 101° to 103° is quite common.

In treating the disease, absolute rest in bed from the first seems to be the one and the great essential. Experience amply proves that it is very unwise to allow a patient who has had influenza to leave his bed until after he has had four to six days or even longer of normal temperature all day. It is during this period of low vitality without pyrexia that bronchopneumonia, so-called, is very likely to develop. How many avoidable deaths have occurred from bronchopneumonia, supervening after several days of normal temperature, it is hard to say; but we have all seen them repeatedly.

Of the sequelæ of the present epidemic, it is probably too early to say much. The writer is inclined to believe that, on account of the lack of resistance and the low vitality which seem to be produced by an attack of influenza, we shall have some late complications, the nature of which we cannot as yet foresee. Latent foci of tuberculosis light up under the influence of influenza, as one would expect them to do. Whether new infections of tuberculosis are apt to occur, we do not as yet know. It seems to be the general impression that there is much less nervous and psychic disturbance following the attacks of influenza in the present epidemic than there was thirty years ago. It will be remembered, however, that many of these former instances of psychoses did not show themselves until some time after convalescence from the disease itself.

THE PATHOLOGY OF THE LUNGS IN PNEUMONIA FOLLOWING INFLUENZA*

By E. T. Bell, M. D.
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During the months of October and November, 1918, our records show thirty autopsies on bodies dead of pneumonia following influenza.

Aside from pneumonia there are only two fatal sequelæ of influenza which we have seen at autopsy, namely, one, a case of generalized pulmonary edema with bacteriemia; the other, a case of suppurative streptococcic pleuritis and pericarditis. In one case the immediate cause of death was an acute diffuse nephritis; and in another, acute dilatation of the right heart, due to myocardial degeneration; but both of these cases had severe pneumonia also.

In this group there were seventeen males and thirteen females. The youngest was nine months old; the oldest, forty years. Five were less than five years of age, but the majority were in the third decade. The pathologic findings are in general about the same as several other observers have reported. The lungs are usually very extensively involved. Both lungs were affected in twenty-nine cases. Seldom less than one-fourth, and sometimes as much as five-sixths, of the total lung tissue is filled with exudate. As a rule the entire posterior border of both lungs was consolidated, but in a few cases one or both upper lobes were unaffected. The lower lobes were always involved, and, with a few exceptions, more extensively than the upper lobes. Usually, the posterior parts of the lungs were heavier, firmer, and more expanded than the anterior parts, and contained the areas of resolution, if any were found. This is in agreement with the clinical observation that the pneumonia usually begins in the posterior parts of the lungs. In three cases the consolidation in the anterior parts of one or both upper lobes was more extensive and more advanced than it was posteriorly.

Fibrinous adhesions were found on the pleural surfaces in eight cases, in three of which they were very extensive.

In three instances one or more lobes showed typical gray hepatization, and in nine other cases there were small grayish areas here and there on the cut surfaces. In the usual case, however, the involved parts of the lungs were dark-red and heavy, corresponding to the appearances of the stage of red hepatization.

In four specimens (three children and one adult) the purulent exudate was largely restricted to the small bronchi and the alveoli immediately surrounding them, giving the classical gross picture of a bronchopneumonia; and in several specimens there were one or more nodules distinct from the main consolidated mass, which is also characteristic of bronchopneumonia. But in most of the lungs no separate nodules are palpable; the consolidation has a lobar distribution, and the cut surfaces are of uniform appearance. There is a marked resemblance to lobar pneumonia in these cases, but the lung in lobar pneumonia is usually firmer and more expanded.

Microscopically, there was definite histologic evidence of invasion of the lung via the bronchi in seventeen cases, and less certain evidence in eight others. This evidence consists in part of dense accumulations of leucocytes in and around the small bronchioles, while more distantly situated alveoli contain few or no leucocytes. Again, the presence of subacute inflammatory changes in bronchi of intermediate size strongly suggests

*Read in a Symposium on Influenza presented before the Minnesota Academy of Medicine, December 14, 1918.

that the bronchi were involved before the lung tissue.

Fibrin is frequently seen in small amounts, but typical fibrin plugs were found in only two cases, and one of these was a definite bronchopneumonia.

Hemorrhage was a prominent feature in twenty-three of the thirty cases. Sometimes the alveoli over large areas of lung tissue are filled with erythrocytes. Often the erythrocytes in the alveoli are mixed with leucocytes or serum. The erythrocytes show no evidence of disintegration.

Edema was present in twenty cases. This varied from a small amount in the anterior portions to extensive involvement of both lungs. That it is an inflammatory edema, and not a transudate, is shown by the frequent presence of leucocytes and bacteria in the serous exudate. Some alveoli contain only serum and bacteria.

In three cases an interstitial pneumonia was found. One of these patients died six weeks, and another eighteen days, after the first symptoms of influenza. This is considerably longer than the average duration of the illness in the other cases. Two of these patients had a relatively small amount of consolidation in the lungs; the third had a large amount of gray hepatization in addition to the small areas of interstitial pneumonia. In this type of pneumonia the exudate accumulates in the septa between the alveoli. The alveolar spaces are greatly compressed and often occluded. The resorption of areas of interstitial pneumonia would probably be much more slow and difficult than in the case of an intra-alveolar exudate. It is possible that some of the small areas of consolidation persisting in the lungs of post-influenzal cases are of this character.

Cultures from the lungs were made in fifteen cases. Pneumococci were obtained thirteen times, and streptococci twice, in pure cultures. Cultures were usually made in dextrose broth, but in five or six cases smears from the lungs were made on blood-agar plates. No influenza bacilli were found. The autopsy-blood cultures were positive in all the fifteen cases, showing the same organisms that were found in the lungs.

The pathologic evidence supports the clinical observation that the infection first develops in and around the bronchi. The coalescence of these multiple peribronchial areas gives rise to complete lobar consolidation. The small amount of fibrin usually found also supports the interpretation of a bronchopneumonia.

SOME NOTES ON THE BACTERIOLOGY OF THE PRESENT EPIDEMIC OF INFLUENZA

By Kano Ikeda, M. D.
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MINNEAPOLIS

The following data were collected solely from my own personal experience and observation at the Minneapolis City Hospital, both in its laboratory and in its various influenza wards, and represent only a part of the great volume of routine examinations, both laboratory and clinical, that an epidemic of this magnitude naturally imposed upon the hospital.

Of the 175 specimens personally examined culturally to date, 73, or 42 per cent, showed the bacillus influenzæ, while 102, or 58 per cent, showed no bacillus influenzæ. Of the 102 negative cases, 21 were found to be positive on previous or subsequent examinations, and 8 were repeatedly negative. Of the latter, at least, 2 clinically presented physical signs, including the crisis of lobar pneumonia; 1 was frankly tuberculous; and another gave a positive Widal for typhoid fever with its clinical manifestations.

"Harmone" agar was employed in the last 28 of these 175 examinations with 17 showing the bacillus influenzæ in culture, giving a slightly higher percentage of positive recovery.

In my experience, the classical method of washing the sputum in sterile water or a saline solution before plating did not work out as successfully as the direct inoculation on blood-agar plate of the unwashed sputum. By the latter method from 11 of the 20 sputa, the organism was recovered; while, by the former, the same samples yielded only one doubtful, perhaps involution form of the bacillus influenzæ, the remaining 19, including the 10 positive sputa, being all negative. This is significant. The fact that other physical conditions influencing the very life of the organism, such as a sudden change in the medium, tem-

perature, osmotic tension, etc., to which a process of repeated washing naturally exposes this delicate organism, must have an important bearing upon a successful cultural result, should not be lost sight of.

From a specimen of post-mortem lung puncture left at the room temperature, a successful recovery of the bacillus influenzæ in culture was made after seventy-two hours. A sample of sputum loaded with the bacillus influenzæ gave a positive culture as long as it remained moist at the room temperature. An excessively hot incubator inhibited the growth of the bacillus in the sputa from which, upon proper incubation on the following day, the organism was recovered.

Blood cultures were all negative for the bacillus influenzæ. Various media and methods were employed, and cases were carefully selected as to high fever, leucopenea, and all other classical symptoms in their height of severity.

Thirteen specimens of lung fluid were obtained by means of puncture from immediately after to twenty-four hours after death. Of these, 4 showed the bacillus influenzæ, 2 in conjunction with the pneumococcus alone, and 2 with the streptococcus and the pneumococcus. The pneumococcus was invariably present, except in one instance when a Gram-positive diphtheroid bacillus only was recovered. The hemolytic streptococcus was obtained in 6, all in conjunction with the pneumococcus. The micrococcus catarrhalis was found in one instance.

None of the samples of thoracic fluid examined showed the bacillus influenzæ, the pneumococcus or the streptococcus, or both, being usually present. In two or three instances the fluid was clear and sterile. A thick, greenish purulent fluid has been the rule, though a thin bloody material was also met with.

The grouping of the pneumococcus has been attempted in a limited number of cases. Of the 9 sputa examined, 8 belonged to Type IV, and only 1 to Type I. Of the 4 thoracic fluids, 2 of Type IV, and 1 each of the Type II and Type I were observed.

Presenting culturally were minute, almost transparent, discrete colonies, visible only by reflected light, and morphologically a Gram-negative coccobacillus of an unmistakable arrangement on a smear from one of these colonies. I believe personally these characteristics are sufficiently diagnostic for identification. The involution forms are frequently met with, which, too, can be easily identified. The isolated organism did not grow in media not containing hemoglobin. Guinea-pigs did not show any signs of disturbance following an intrapulmonic injection of 1 c.c. of the saline suspension of the pure living culture of the bacillus influenzæ, except for an attitude of slight malaise during the first twenty-four hours.

A nasal and post-pharyngeal implantation had no influence whatever.

Authorities differ as to the direct cause of the present epidemic of influenza. Few are emphatic in their belief that the bacillus influenzæ is the primary cause of the disease, although death is, in the majority of cases, invariably due to bronchopneumonia caused by the secondary or concomitant invasion of the streptococcus and pneumococcus, coupled frequently with a profound toxemia, thought to be attributable to these organisms. The latter alone, in isolated instances, appears to be responsible for the early termination without any extensive pulmonary complication. Again, there are a few who are equally emphatic in their assertion that the bacillus influenzæ has no bearing whatever upon the present epidemic, claiming that the organism has not been consistently isolated by various observers.

The absence of immunologic reaction in man, such as the complement fixation, agglutination, precipitation, etc., is also advanced to support their contentions. The majority, however, are still reserving their final judgment, though they are inclined to the latter view on the face of the recent reports, in which most of the investigators are able to isolate the organism in but a small percentage of cases examined.

Thus, the exact rôle of the bacillus influenzæ in the present epidemic is still a matter of conjecture, although it may be safely conceded that the organism has been one of the important etiologic considerations up to the present time. It would seem quite reasonable to say that a careful attempt to recover the bacillus influenzæ culturally from the exudates of the patient suffering from influenza should be an imperative routine in the study of these cases until at least a definite causative agent other than this organism is finally established.

Personally, I am not prepared to say that the organism is the exciting cause of the symptom-complex known as influenza. I am of the firm opinion, however, that the bacillus influenzæ could be isolated from the sputum of every true case of influenza of the present epidemic, provided a technic is perfected whereby the co-exist-

ing micro-organisms, such as the pneumococcus, streptococcus, and micrococcus catarrhalis, be rendered as nearly inert or negligible as such a technic permits without in anyway affecting the bacillus influenzæ itself.

Until such a technic is developed, one cannot too strongly emphasize the prime importance of such fundamental conditions as a selection of a proper specimen, as to its character and source, a preparation of a proper medium, an inoculation on, not one or two, but several plates, if possible, from one specimen, a painstaking search for a possible isolated colony in case of apparent negative growth.

These and other less important conditions are laid down, not because of the scarcity of the organisms in a given specimen when present, but because of the powerful exogenous influences exerted by the more highly resisting bacteria upon the more delicate bacillus. It may be said that, in my opinion, the symbiotic influence, if any, of these associated bacteria upon the bacillus influenzæ is of no significance when their overwhelming numbers and greater viability are more likely to outgrow it.

SUMMARY

1. The bacillus influenzæ was recovered in approximately 50 per cent of the 175 sputa examined, covering the period from October 15 to November 1, 1918. This percentage can be increased considerably with an improved technic and a proper selection of the sputum and culture media. Unwashed sputa invariably gave a better result.

2. Blood cultures uniformly gave a negative result for the bacillus influenzæ.

3. From post-mortem lung punctures the organism was recovered in 32 per cent of the cases examined.

4. Thoracic fluids gave no bacilli influenzæ, the pneumococcus and the streptococcus being the usual habitants.

5. The majority of the pneumococci belonged to Type IV.

Finally, I am greatly indebted to Dr. A. C. Potter for his helpful suggestions and willing assistance, and to his laboratory co-workers and the members of the medical staff for their kind co-operation which made this paper possible.

A PRELIMINARY REPORT OF TWO HUNDRED INFLUENZA CASES AT THE MINNEAPOLIS CITY HOSPITAL*

By Hilding C. Anderson, M. D.
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MINNEAPOLIS

The purpose of this paper is to report, in brief, our clinical findings in the first 200 cases of epidemic influenza which came to the City Hospital.

Sexes.—In the first 200 cases there were 119 males and only 81 females. In percentages, 60 per cent were males and 40 per cent were females. (See Chart 1.)

Pneumonias.—Of the two hundred cases 125, or 64 per cent, showed pneumonia, and only 72, or 36 per cent, had no pneumonia. The large percentage of pneumonias is due to the fact that only the severe cases were admitted to the hospital.

Mortality.—Forty-six of the 200 died, a mortality-rate of 23 per cent of the entire number. All of those who died had a pneumonia, making thus a mortality-rate among the pneumonias of 36.8 per cent, or almost 37 per cent. This comparatively high death-rate is again partially due to the fact that the most severe cases were selected for admission to the hospital. Two or 3 died within less than an hour following admission. Seven of the 46 died in less than twelve hours, and many more within twenty-four hours. In a word, many of the patients were brought in when moribund, and most of them late in the disease. Seventy-six per cent came later than the fourth day.

Among those who died, 36, or 78 per cent, were males and only 10, or 22 per cent, were females.

I have classified the pneumonia cases (Chart 3) as mild, moderate, and severe. Twenty-four per cent (30 cases) were mild; 27 per cent were moderate; and 49 per cent (almost half) were severe. Of the severe cases 71.5 per cent (45) died; 23 per cent (16) have recovered; 3 per cent (2) are still doubtful as to the outcome. This classification is merely an arbitrary and, more or less, an individual matter, as is also the diagnosis of pneumonia in the mild cases. There

*The work covered in this paper was done at the Minneapolis City Hospital in the University Service.

were probably more cases of mild pneumonia than I have indicated.

The comparison of the epidemic in the matter of sexes, is very interesting: 72 per cent of the males had pneumonia and only 47 per cent of the females were so affected. Of the males who contracted pneumonia 42 per cent died, of the females only 26 per cent. (Chart 4.)

A comparison of the incidence at different ages is also of great interest. There were 17 per cent in the second decade or, rather, from 12 to 20; 48.5 per cent (almost half) in the third decade; 25 per cent in the fourth decade; 7 per cent in the fifth decade; and 1.5 per cent in the sixth decade and one each or half a per cent in each of the seventh and eighth decades. (Chart 5.)

The mortality rate at the different ages is very different from the occurrence. (Chart 6.) Only 15 per cent of all patients between 10 and 20 years of age died; 20.5 per cent of those in the third decade; 24 per cent of those in the fourth decade; and 29 per cent of those in the fifth decade. As the last figure represents only four deaths, it probably does not have much significance.

A better conception of the epidemic at large can be obtained from the epidemic among our nurses (most of them are not included in these 200 cases) than from the above figures. Of 88 cases among the nurses about 20 per cent contracted pneumonia, and only one died. The one who died was an outside nurse and, strictly speaking, should not be included. These figures are not exact, but are approximately correct. Incidentally, it is interesting to note that 50 per cent of the 175 nurses at the Hospital have had influenza.

Course of the Disease.—The course of the disease is probably more or less familiar to many of you. The history is usually that of a beginning general malaise and headache, followed very soon by a cough and a sense of oppression in the chest. The cough may be the first symptom. The malaise develops rapidly in the course of a few hours to general body pains, particularly a severe backache, and a very considerable degree of prostration. The temperature rises rapidly, and may reach 103° or 104° in from twelve to twenty-four hours. The onset, on the other hand, may be very sudden, an apparently normal individual passing into a state of complete prostration in the course of two hours. In going over a number of our histories, I found that about 50 per cent had developed suddenly, and the others more gradually through twelve to twenty-four hours. The cases developing very suddenly, usually begin with a chill.

An analysis of 100 histories taken upon admission showed these proportions of the following symptoms (Chart 7):

1. Weakness, or general malaise, was complained of in 97 per cent of the cases.
2. Cough in 91 per cent.
3. Headache in 90 per cent.
4. Anorexia in 75 per cent.
5. Backache in 74 per cent.
6. Chilliness in 74 per cent.
7. General body pains in 73 per cent.
8. Sweats in 71 per cent.
9. Soreness in the chest in 70 per cent.
10. Vertigo in 67 per cent.
11. "Stuffiness" in the upper air passages in 62 per cent.
12. Coryza in 55 per cent.
13. Chills in 53 per cent.
14. Sore throat in 53 per cent.
15. Nausea in 52 per cent.
16. Eye symptoms, such as pain, stinging, burning, or photophobia, in 41 per cent.
17. Vomiting in 37 per cent.
18. Tinnitus in 35 per cent.
19. Epistaxis in 33 per cent.
20. Pleurisy in 25 per cent.
21. Diarrhea in only 17 per cent.
22. Bladder symptoms (incontinence or retention) in 10 per cent.

The uncomplicated cases run a course of usually two or three days to a week. A certain percentage (15 per cent of the 100 histories analyzed) show a definite remission about the third day, followed by a secondary rise, which usually means pneumonia. The pneumonia begins to develop from about the fourth to the eighth day. It appears first just above and medial to the tip of the scapula, about as often on one side as on the other, and advances rapidly downward to the base. It very often becomes massive, and involves nearly all of both lower lobes. After reaching the base it advances upward from the initial point, but more slowly.

The temperature through the initial influenza stage is fairly typical. It rises rapidly to 103° or 104,° remains between 101° and 103° for two or three days, and then drops rather rapidly to normal in from twelve to twenty-four hours. During the pneumonia the temperature is variable. It is usually high during the first two or three days; after that it is often a very poor index

as to the patient's condition. Many feel fairly comfortable with a temperature of 104,° while a large number of those who are doing badly show a temperature of between 101.5° and 102.5.° Just before death this may rise rapidly to 106° or 107,° or it may drop to normal.

In the pneumonia cases of our series which recovered, the temperature dropped by lysis in 85 per cent and by crisis in 15 per cent.

The pulse is usually slow in comparison to that which one would expect with the temperature. The rate is about 90 to 100 until the patient begins to do badly, when it may rise rapidly to 120 or 130 and even as high as 160.

The blood-pressure is low, and often gives, together with the slow rate, a pulse very similar to that of typhoid. The systolic pressure averages about 105; the diastolic may be anywhere from 0 to 60. The pulse-pressure is usually high.

The respirations are rapid as in any pneumonia.

The outstanding feature of the pneumonia as we have seen it is the toxemia. Most of these cases were very toxic.

I can merely mention the treatment. Patients who come to us early are given quinine or asperin, or both, for the first day or two. All receive temperature-sponges for a temperature of 103,° and ice-caps for a temperature of 101.° Elimination is encouraged both by mild catharsis and by the forcing of fluids. Beverages prepared from citrous fruits have been used a great deal. The rest of the treatment has been largely symptomatic and good nursing. The latter is very important. Great stress had been laid upon attention to detail. The nurses are instructed to satisfy the patient's every want as far as possible and to make him as comfortable, in every way, as possible.

We have used stimulants freely. Those used oftenest are strychnine, camphorated oil, and pituitrin. Digitalis has been used at times, but usually only when there was a definite heart lesion or when the heart seemed to be mechanically embarrassed.

We have used intramuscular injections of whole blood for the purpose of stimulating resistance, and have done so, we think, with some fair results. We are now using convalescent serum intravenously. It is too early yet to make a report of this, but the indications promise more than any treatment yet attempted.

The average length of the disease in the uncomplicated cases is twelve days,—that is, the patient is discharged from the hospital on the twelfth day after the onset. Usually he has then had no rise of temperature for five days, the disease itself having run a course of about seven days. The cases of moderate pneumonia have been discharged on an average upon the twenty-second day. The severe cases which recover run a course of three to six weeks. Of the cases resulting in death, about 70 per cent run for nine days or more; none of these 200 patients have died in less than five days.

The most common complications besides pneumonia are the following: Nephrosis; acute retention; otitis media (6 per cent); sinusitis (2.5 per cent); and abortion among the pregnant women—(a large percentage having pneumonia abort). Empyemas and abscesses also occur.

The leucocyte counts and the urine analysis are perhaps of most interest in the laboratory work.

The leucocyte count in our first 65 cases showed a leucopenia in practically all early in the disease. During the course of the disease 49, or 75 per cent, showed a leucocytosis. Of the 15 cases which did not, 11 had no pneumonia, 1 had a doubtful pneumonia, and 3 had a severe pneumonia. All of the last-mentioned died.

Eighty per cent of 55 cases picked at random gave positive albumin tests in the urine, and most showed casts in the sediment.

I realize that this report is incomplete and in no sense of the word an exhaustive study. When the epidemic struck, as it did, like a storm, we had no time to make complete records or to study carefully and scientifically the details of the disease. When the epidemic is over we hope to make a more careful study.

I am indebted to my associates at the Hospital especially, Dr. Crandall, for assistance in preparing this report.

The charts on the next page show graphically the facts above stated.

CHART I—SEXES

Total number of cases 200

No. of males . . 119, or 59.5 per cent.

No. of females . . 81, or 40.5 per cent.

CHART II—PNEUMONIAS

Total number of cases 200

No. of pneumonia cases . . 125, or 63.5 per cent.

No. of cases without . . . 72, or 36.5 per cent.

No. of deaths . . . . . 46, or 23 per cent.

No. of deaths of males . . . . . 36, or 79 per cent of total deaths in the pneumonia cases.

No. of deaths of females from pneumonia, 10, or 22 per cent.

CHART III—GRADES OF PNEUMONIA

No. of cases . . 125, or 62.5 per cent of the cases (200) reported.

Grade 1 . . 30 cases, or 24 per cent.

Grade 2 . . 34 cases, or 27 per cent.

Grade 3 . . 61 cases, or 49 per cent.

CHART IV—DISTRIBUTION OF PNEUMONIA AS TO SEX

100 per cent.

Pneumonia in males . . 72 per cent.

Pneumonia in females . . 47 per cent.

Deaths of males . . . . 42 per cent.

Deaths of females . . . 26 per cent.

CHART V—AGES

Total number of cases 200

From 10 to 20 . . 34, or 17 per cent.

From 20 to 30 . . 97, or 48.5 per cent.

From 30 to 40 . . 50, or 25 per cent.

From 40 to 50 . . 14, or 7 per cent.

From 50 to 60 . . 3, or 1.5 per cent.

From 60 to 70 . . 1, or 0.5 per cent.

From 70 to 80 . . 1, or 0.5 per cent.

CHART VI—MORTALITY BY AGES

100 per cent.

From 10 to 20 . . 15 per cent.

From 20 to 30 . . 20.5 per cent.

From 30 to 40 . . 24 per cent.

From 40 to 50 . . 29 per cent.

CHART VII—SYMPTOMS.

Symptoms in 100 cases.

1. Weakness in 97 cases.
2. Cough in 91 cases.
3. Headache in 90 cases.
4. Anorexia in 75 cases.
5. Backache in 74 cases.
6. Chilliness in 74 cases.
7. Body pains in 73 cases.
8. Sweats in 71 cases.
9. Sore chest in 70 cases.
10. Vertigo in 67 cases.
11. Stuffiness in 62 cases.
12. Coryza in 55 cases.
13. Chill in 53 cases.
14. Sore throat in 53 cases.
15. Nausea in 52 cases.
16. Eye strain in 41 cases.
17. Vomiting in 37 cases.
18. Tinnitus in 35 cases.
19. Epistaxis in 33 cases.
20. Pleurisy in 25 cases.
21. Diarrhea in 17 cases.
22. Bladder symptoms in 10 cases.

AORTITIS*

By H. L. Staples, A. M., M. D.
Physician to the City Hospital
MINNEAPOLIS

For many years in my hospital and private practice during the course of infectious diseases patients would occasionally present symptoms connected with the vascular system that I could not fully comprehend. I saw through a glass darkly. In 1910 Dr. McCrea, of Johns Hopkins, published a scholarly and valuable paper in the *Journal of the American Medical Sciences,* entitled "Dilation of the Aorta." He demonstrated that in the course of acute rheumatism, pneumonia, typhoid fever, influenza, diphtheria, smallpox, and other infectious diseases, especially syphilis, inflammation of the aorta with dilation would occur.

Severe strains or exposure is a factor probably causing the symptoms to appear in a condition already present. Arterial sclerosis often presents a chronic form of the disease.

CASE

Mrs. B., aged 70, for many years had a mitral insufficiency with moderate hypertrophy. Last spring signs of decompensation appeared with commencing general anasarca. During a grippe attack she had typical angina pectoris, followed by great prostration with marked dyspnea, substernal pain extending to the cardiac region, and atrial fibrillation, which is best described by Lewis as "a grossly irregular pulse, a hopeless jumbling of strong pulsations with quick runs of almost imperceptible beats." There was marked dullness extending over two finger-breadths on both sides of the sternum. Pulsation in the episternal notch and in the second right intercostal space, noticeable swelling of the neck, and distention of the neck veins appeared. The blood-pressure was low and kidneys nearly normal. She slowly improved, and I obtained a picture of the chest showing the bee-hive aorta, blending uniformly into the heart-shadow. Recently she has had two very severe attacks of heart-block, rendering her well-nigh moribund. She has had an occasional epilepsy for years, and I could not determine whether the epilepsy initiated the heart-block or not. The appearance is about identical, only there were no biting of the tongue and no incontinence of urine; and the ventricular action was markedly diminished, instead of increased, as in true epilepsy.

Three weeks ago I found her literally drowning from the anasarca. She was cyanotic, unconscious, and pulseless. Stimulation and deep scarification in both legs discharged an enormous amount of fluid, and she revived.

I felt so positive of my prognosis that I announced the presentation of a case, meaning the pathological specimen, for this evening; and now she "bobs up serenely," and says she is good to last the winter out, at least.

*Read before the Hennepin County Medical Society, October 7, 1918.

Thirty years' medical service at the City Hospital, where cardiac cases predominate, has impressed one thing on my mind, which Sir Thomas Browne said should be an attribute of every physician, namely, "humility." God and man despise a conceited doctor, which must be especially true of the physician who claims an exhaustive knowledge of cardiac maladies.

The endurance of the arch of the aorta under the incessant lashing of the blood for, in some cases, three-quarters of a century, is marvelous. The infections greatly weaken this structure. Numerous cases of post-influenza aortitis have been verified, by necropsy, the bacillus influenzæ found there and in the cerebral tissues. There are certain features to be considered in the recognition of this disease.

There are a fullness of the neck and marked swelling of the neck veins. Pulsation in the episternal notch is very common, also in the first and second rib interspaces, especially in the second right. The pain varies greatly,—from slight in character extending to utter torture. It is located in the upper sternum, radiating to the cardiac region and down the brachial plexus on both sides. It is more persistent than in angina, but not so severe, and is often termed "angenoid."

Aortitis has its fever, though the fever is often merged with that of the parent disease. A syphilitic kind of fever has been noted by Popoff. Dyspnea exists in varying degree, and is often intense and accompanied by cyanosis.

On auscultation the second sound frequently has a ringing, bell-like amphoric quality, termed by the French "timbre metallique."

Percussion gives information of much importance. Dullness can easily be determined on each side of the sternum, sometimes with marked distinction, extending two or even three finger-breadths each side of the sternum.

Potain demarks it as dullness "en casque" in the form of a fireman's helmet. By percussion we may demonstrate recessions in the various types of aortitis, but never in syphilis. The *x*-ray often determines the diagnosis. There is increased width of the aorta. With fluoroscopic examination the shadow varies in size, but persists between pulsations. Syphilitic disease of

the aorta is far more common than of the heart. Young men apparently in perfect health sometimes drop dead from syphilis in this locality. The French have reported many cases among their soldiers.

As this condition is frequently associated with cardiac disease it is often overlooked, especially in rheumatic fever. The prognosis in syphilitic aortitis is distinctly worse than where aortitis arises from other causes.

In the treatment of these cases rest is placed above all other measures. Iodide of potassium is administered in small doses for a considerable period.

In the cardiac cases with commencing decompensation, digitalis is the drug before all others; and of the various preparations I now prefer the tincture. It is contra-indicated where the heart is not involved. The infusion is almost sure to disturb the stomach in a short time. Doses of the tincture must be adapted to each individual patient. The smaller the dose the better, provided we get beneficial results; for we must remember that it is a poisonous drug. I have not used for years the much-vaunted proprietary cardiac preparations exploited by the Rhine bandits. For the anasarca Klutterbuck's elaterium, $\frac{1}{10}$ grain at bedtime, or the strong tincture of apocyum, which Dr. Hare calls the vegetable trocar, is valuable. Where the lower limbs are greatly swollen, incisions, one or two inches long, made deeply into the cellular tissues above and on each side of the malleoli, have given me great benefit. Diet is important, especially the Karell diet.

All these measures will relieve the strain on the stretched-out aorta. Strophanthin, as recommended by Dr. Barker, is important in cardiac failure, $\frac{1}{500}$ grain being injected deeply into the buttock muscles, and the locality rubbed for several minutes.

When I came to Minneapolis, over thirty years ago, there were about one hundred and fifty physicians in active practice here. Of these about twelve are active today. A large proportion of them have died from vascular diseases. Dr. Osler states that one-third of the people who consult him for angina pectoris are physicians. The struggle to keep up appearances and stave off bill-collectors is, for many, a great strain on the arterial leather. Syphilis is notably on the increase, and we find by repeated Wassermann tests many positive unsuspected cases in our ranks. Some acquire the disease accidentally; others acquire it foolishly by the classical method, leading frequently to aortitis, aneurism, paresis, and death, the victim going down like an ox to the slaughter. The young and vigorous among us should curb the unlicensed desires. Be virtuous and be happy.

There is no pool of Siloam that will grant perfect absolution. To the older members, fortunately or unfortunately, according to the viewpoint, these desires have become merely a matter of historical importance.

INFLUENZA AND TUBERCULOSIS

One of the chief characteristics of the present epidemic is its debilitating effect on the system. The virus, whatever it may be, seems to strike at the very citadel of our strength and general weakness is the result. This explains why so many fall victims to other diseases immediately following the acute attack. In the matter of pneumonia, the germs of which are nearly always present in normal throats, it just needs the action of the influenza infection to prepare the soil and reduce the resistance so that the specific organism may find conditions conducive to development. The same may be said of other diseases. Tuberculosis may lie dormant for years and barring an exciting cause may continue to do so indefinitely, but any acute disease affecting the respiratory tract, and especially such a debilitating one as influenza, has a tendency to "light up" an old lesion and change it from a latent to an active form.

Since practically every one some time in life has had tuberculous infections, the great majority of which are latent, it would seem reasonable to suppose that very many of these, after an attack of influenza, will be formed into active lesions. Influenza has very few deaths to its credit, but it is the aftermath of pneumonia and tuberculosis that are to be dreaded. Of the former we are at present recording many deaths, and of the latter we will record very many more but it will be months or years before they are all listed. The pneumonia infection means a week or two at most while the tuberculous infection is slow and insidious. Any person who fails to recover promptly after an attack of influenza should be subjected to a rigid examination and care taken to eliminate tuberculosis as a factor in the process. The hacking cough, fevered cheek, rapid pulse, slight rise of temperature or tired feeling, are suggestive and should not be passed lightly by. Timely attention may mean a life saved, delay may mean the reverse.—*The North Dakota Pennant.*

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THE INFLUENZA SITUATION

It is evident from the reports throughout the country that the second wave of influenza has been more widespread than the first; and, although the immediate death-rate is not as great as in the first instance, it seems quite likely that it will increase for a time, as the conditions and the attack vary greatly from what we had in the first wave.

Minneapolis and St. Paul have endeavored, in various ways, experimental or otherwise, to cope with the situation; but as yet the results accomplished have formed no basis for a definite conclusion. Minneapolis again closed her schools, while the St. Paul schools remained open, and yet the number of cases that are reported are much greater, and incidentally, the number of cases not reported are almost equally great. It is very difficult, apparently, for physicians to find the time to report the number of cases; and, unless they are reported early, one is apt to forget the patient and his influenzal disorder. Then, too, the number of mild attacks has hindered the reporting process. Some people are sick but twenty-four hours and make a good recovery; others are sick with the typical three-day fever period, and recover in a week or ten days; but a large number of the cases continue for a longer time, and a good many of them run into weeks, mainly because the patients are exhausted, and tired, and continually show evidence of mild reinfections.

Another persistent feature is the constant hacking, dry cough, which is attended by soreness in the chest and the irritable mucous membrane in the lungs, which gives rise to a great discomfort day and night. Then, too, there are a certain number of people who have very little resisting power, and, when the first attack is on them, they give up and are worried and frightened about themselves, thus prolonging their illness. There are many instances reported of people, including physicians, in the country, who, while suffering from influenza of a moderate or even a severe type, have gone on about their duties, and they eventually get back on their feet again, although their recovery may have been somewhat prolonged.

Too much praise cannot be given to the physicians who attend the families affected with influenza in the outstanding towns and in the country. Frequently these doctors make from sixty to seventy calls a day, or see that many patients a day, while they themselves have colds or coughs, or are otherwise extremely uncomfortable.

The epidemic, as it exists at the present time, has gone through whole families, and some travelers and doctors report that they occasionally go into a house where they find two or three people dead from the disease, while the rest of the family are sick and unable to take care of themselves, or even to notify the authorities. A traveling man reports that he stopped at a house to fill his automobile radiator, and found it impossible to arouse anyone. He finally went to the back of the house, looked through the window, and saw people lying about the floor. He then got in through the window, and found two or three of the inmates dead and four or five very ill. This has been a common experience in the Northwest. The inability to get help, even from neighbors, and the absolute inability to get nurses, have been the constant cry of these people.

The death-rate has been comparatively large, but it goes in waves; but the sequelæ which invariably follow an epidemic of this kind have not, so far, been recorded except in a few instances. Mental and nervous disorders following the disease are yet to be reported, although a sufficient number of them have been seen to warrant the fear that a good many of the cases are toxic and that the toxicity expends itself in the nervous system. But these people belong to the selective nervous type, just as others belong to the selective pulmonary type, or to the cardiovascular type. In the meantime, the controversy and the arguments, pro and con, as regards vaccine go on. There are still adherents to the vac-

cine method of treatment; and they perhaps predominate. There are still also many objectors, who have little or no faith in the prophylaxis of vaccine. But this occurs in every epidemic, or any other form of widespread disorder. Each man has his choice of therapeutic pathways, and, undoubtedly, each man develops his own system of caring for these patients. The end-results probably are not materially affected, as most of these epidemic diseases are self-limited, and the patient either dies or soon shows his tendency to recover. But what we would do if there were not medical problems is instructive. We have all learned a great deal about the epidemic, and we are still in a position to learn a great deal more. The real toxic agent evidently has not been isolated, in spite of the fact that the serologist still feels that the Pfeiffer bacillus is the chief agent in this influenzal and pneumonic outbreak.

With the schools closed, the theaters wide open, and the department stores entertaining their annual rush of people, it is easy to see how the infection is spread; and yet the people are almost as indifferent as were the armies in Europe. They care nothing, apparently, for what may happen, or they become indifferent and stolid in their attitude, and they are determined to have all the pleasure in life they can get until "their time comes." The *London Times* estimates that 6,000,000 have died from influenza and pneumonia in the world in the past three months, about the same number that have been killed in the great war.

The State Board of Health has been obliged to withdraw the ban on meetings because it lacks the necessary funds to continue the work.

We shall be better prepared, perhaps, for the next wave, or the next epidemic that sweeps over the world.

THE PSYCHOLOGY OF PEACE

The sudden and abrupt termination of the war by armistice was so unexpected that it caused almost as great an international catastrophy as did the declaration of war in 1914. Every nation has in some way taken part in the great conflict, and every nation is consequently suffering from its sudden cessation. No one knows what the ultimate outcome will be; no one can foresee the adjustment of the people to their normal environment; and no one can foretell what the industries of the country are going to do. One can readily imagine that, with all the revolutions now going on, it will be a long time before one can fully appreciate the disaster which has overtaken us. The armistice was a good thing in its way, but an unfortunate thing from another viewpoint. It was fortunate that it terminated the wholesale slaughter going on between the Central Powers and the Entente; but it was unfortunate that it came before Germany had learned her lesson, and many people would have welcomed the continued invasion of German territory in order to show the intolerant people of that country that they must suffer physical waste and material destruction and occupation of cities throughout Germany before they will fully understand the attitude of other nations. There is no question but what the Allies will demand a just and fair settlement of the conditions of war, and will see that the Central Powers are sufficiently punished before the final peace treaty has been signed. It is appalling to think of the enormous waste of life and needless destruction of property; and yet, from all accounts, Germany is not at all downcast, in spite of the fact that her request for an armistice was the most humiliating event that can occur in the life of a nation.

Perhaps the greatest effect of the war is the feeling against Germany in the allied countries and in many of the neutral countries toward the people of Germany, and herein our psychology of things will be tested to its utmost. The German rulers and the military classes have produced an intolerable condition, and have invited the severe criticism of all nations, and it is quite probable, in spite of the continual German propaganda, that Germany, economically and industrially, will be forced to admit that the bringing on of the war has been an unprecedented, as well as an unnecessary, calamity to the world.

We have been told that a war of this kind is a cleansing war, but we are obliged to admit that the cleansing process has been done with dirty water. This has not been a war in which the common man has suffered the most. It touched all classes, from the highest to the lowest, from the richest to the poorest; and the nations whose manhood has been sacrificed, killed or wounded, will never feel toward Germany, or any of the Central Powers, as they did before war was declared. It probably will take a good many generations to balance the feeling of friendship between the war-starters and the Allies before any social or industrial intimacy can be made tolerable. In spite of the unwonted attitude of the rulers and of the soldiers who have precipitated murder, devastation, and useless destruction,

there must be many good people who were not sympathizers with the war party, but their efforts have been crushed or they have suffered compulsory silence. The world cannot be all bad, there must be those who can think and judge sanely instead of following the ravages of those who are egotists or who are clearly unsound in mind.

One expects almost anything from the Balkan region where they have looked upon death simply as a heroic ending of life. Turkey evidently was misled in some respects by the German nations, or was forced into the German combination against the will of the people in general; but all reports show that the Turkish authorities have been just as unyielding, just as barbarous, as any other race of people who have been brought up against a world-wide problem. Turkey's attitude toward the Armenians will not secure her any benefits or admiration from any nation. It has been said that Turkey has refused to use gas bombs and other like horrible methods of warfare. This may be true, and there may be a reason for it; but she has exhibited her taste for lust and murder, and, consequently, has acquired the eternal displeasure of most of the nations.

Four years ago, at the onset of war, the editor of The Journal-Lancet was rash enough to write an editorial on the "Psychology of War," which did not meet with much favor among the German sympathizers in this country, and he was called to account for it in various ways. However, the truth of the statements made at that time has been borne out; and when Emil Riech, a native-born Austrian, who lived in England many years, wrote a book before his death, in 1907 (seven years before the war began), urging England to prepare for the ultimate conflict, —a book full of suggestive ideas,—he was not taken seriously by the English people. He predicted that in the event of a war Germany would be defeated, and he asserted that the Germans would prove cowardly in the end, though brutal and savage in the onslaught. He said they were a powerful nation; but, when the end came, they would prove the brittleness of their character; and when they broke they would break into many pieces, and they did just as Riech said they would.

The time is not yet come to pass definitely upon those who are responsible for the war; but when everything is shown up and the exposures made that must come out eventually, the probabilities are that there will be a stronger feeling against the Central Powers than ever before, and people will instinctively keep away from anything that is German in its foundation. Unless Germany makes reparation for her misdeeds, and, until the nations are in thorough accord as to the return of the war system, there will be no real peace. The American nation is, as a rule, a forgiving one; but it is to be hoped that no true American will settle down to this indifferent opinion for many years to come. The reconstruction of the ideas of nations, the reconstruction of its people and of its industries, is a matter to be contemplated with great anxiety.

Thinking people, and people who have a reasonably broad point of view, will always look to France and the French people as a nation to depend upon. They have suffered more, in indignities, destruction, and death, than any other nation, and have shown the valor of their native elements more than has any other nation. Great Britain comes next, and she did the most to protect the various Allies, because she was more powerful in her sea-power than any other nation. Italy deserves the greatest praise, because she has always been looked upon as a bankrupt nation, a nation dependent; and yet, when the crisis came, she met the situation, took her defeats, and started all over again to win glory in the end.

Although America has done wonderful things in the way of money, materials, and military construction, and has sacrificed many lives and endured many casualties, we must not be too boastful of our powers. What we did was done on the spur of the moment, as it were; but it was done with thoroughness, because we were heartily in sympathy with the aims of the Allies and sought no conquest. We had high ideals and have maintained them, although politicians and pacifists, pro-Germans and others, did much to interfere with our preparations and our activities. We maintained our place among the world powers, and, in spite of all the criticisms that have been indulged in against the President of the United States, Woodrow Wilson has shown himself to be equal to the situation, although people bark at him, criticise him, and tell how they would have done things differently when they would have done them only indifferently. Mr. Wilson has maintained his dignity, and has fulfilled the promises of America.

Now many nations are suffering from internal revolutions. Russia has divided herself into numerous factions, has been misled shamefully by theorists, has been invaded, and her peace has been utterly annihilated; but eventually she will

rise and become a power without Germany's aid. It is sometimes amusing, in spite of the terrors of the war, to look upon the ill-timed revolutionary ideas of the various sections, not only in Russia but in other countries, and although the Allies, and the United States in particular, will do all in their power to save Russia from complete destruction, revolutions will go on for a long time. It seems almost a Utopian dream to think that all nations will soon be at peace again. That is something we wished for, but something that we may not be able to attain soon.

The medical profession should not be forgotten in the psychological aspect of the situation. Medical men all over the world, including those of all nations, have given themselves freely, have disrupted their home affairs, have suffered disorganization, and many of them have been killed in action or died from disease; and yet not one of them has hesitated to get into the medical field, in spite of all the difficulties, and they have maintained their dignity and their professional prominence, and their efforts to make the sick and wounded comfortable. They have contributed to the methods of rehabilitation and physical reconstruction more than the average man can understand.

ARE YOU GROWING OLD?

With the advent of the New Year a good many people take stock of themselves and their age. This does not apply to lay people alone; but also to men in the medical profession, for the medical man is quite as apt to say that he is growing old as is the layman. This is an unfortunate attitude of mind, because the principal feature of growing old is a state of mind; and the better this state, the younger the individual. The old saying that a man is as old as his arteries has been paraphrased by some wag, who said that a man was as old as his rubbers, incidentally meaning that no man need be older than he wishes to be, and a man who will wear old rubbers without renewing them from time to time is certainly on the downward path, just as the man who is getting along in years, refuses to renew his youth by simple and normal expedients. The expedient of prime value is to keep young in one's mind, and, when one's years increase in number, to make them gracious and satisfying to others.

The writer remembers that once, while visiting in Halifax and attending a military chapel presided over by a rector of the Church of England, a body of soldiers headed by a brass band marched into the chapel. The visitors were relegated to the balcony above, and after a simple service the rector talked to his men on the beauty of growing old gracefully. He said that it was up to the individual to balance out his life, to make himself agreeable, and to increase the happiness of others by a state of mind. This of course requires mental discipline; the throwing off of old associations and old ideas that are shopworn; the entering into the life of the family and the community with the same spirit as do younger people; the keeping up of this pace until it becomes a habit; and the shaking off of all periods of irritability, grouchiness, and selfishness. If one's life is ordered this way there is no reason why every man should not attain his old years with a youthful spirit behind him.

Then, too, there comes the question of associating with others. Should the older man enter into the debates and discussions and interests of the younger generation? Most assuredly he should; and, if he enters them in the proper spirit, he will be as eagerly sought as the younger man—more eagerly, perhaps, because he has experience behind him. This applies to medical men, as well as to the laymen. There are a good many doctors who grow old restlessly; who assume a certain state of mind to which they are not entitled; and because of their years they think that domination, grouchiness, and self-importance are their allotted part. The older one should get more humble, as well as cheerful; he should behave. Experience teaches the older man that the younger man has a lot of new coats for old ideas, and in expressing them he expresses many time-accepted theories, but he puts them in a little more interesting form.

Then, too, the question of diet and exercise should enter into the older man's program in life. The tendency is for the man approaching his sixties or seventies to relax his muscular activities and, incidentally, his mental processess. This is wrong from the athletic point of view. Of course, there are a good many elderly men who overdo the exercise treatment, but there is a form which is applicable to the man of sedentary life or of active life, who, on account of his years, is obliged to give up the greater muscular activities. For instance, Dr. J. Madison Taylor, of Philadelphia, has advocated a systematic daily exercise for the office man, such as can be done while seated in his office chair. This exercise should last from five to ten minutes a day. If it

is not possible to carry out this simple program in the daytime, the same exercise can be undertaken at night while in bed. It consists of, first, relaxing of all of the muscles of the body, and, next, of moving all of the joints of the body in as normal a manner as possible. It is not necessary to overdo this or to do it too rapidly or strenuously, for it has been shown that moderate, quiet, and slow muscular movements gain their object. One can readily try out a program of this sort by remembering the various joint movements, and move in this way each joint with its set of muscles, from three to five times, then waiting an interval of several seconds before the next movement takes place. It will take but a short time to cover all of the joint movements of the body, and, incidentally, to move all of the muscle groups. But the man who is along in years is just as neglectful as his younger brother. He starts out enthusiastically with a firm determination to carry out the program, but he lags—he hasn't the persistence, and he falls into bad habits of inattention.

The diet question is an important one, but it is one which is dependent upon the individual himself. No group of people who are advanced in life can be put under the same dietary regime. For instance, the man of eighty-three who is hale, hearty, and clear-headed, may have been a meat-eater all his life, and without any appreciable harm coming to him. Of course, his neighbor, who is much younger, is horrified at such a diet, for he has been taught that very little meat is necessary to the man beyond fifty, and, consequently, he tries to follow out his self-adopted plan without consulting his medical advisor. The result often is trouble, illness, and other disorders, due to partial starvation, while the old man who eats meat three times a day and continues to grow older in years is really younger in mind and body than the man at fifty, who labors with a false fad. However, on general principles, it is well to remember that vegetables, cereals, cooked fruits, and but little meat are indicated for most elderly people. The men who reduce the amount of their foods and eliminate many of the indigestibles, find themselves in much better condition, both mentally, nervously, and muscularly. They are able to endure the stress and strain of business life on about one-third of the food that they ate before their fiftieth year. Thus each man must be instructed as to what is best for him, regardless of the rest of the family or of other people ready with all kinds of advice and theories.

If these suggestions were carried out we should have a race of virile, alert, and physically and mentally equipped people; but will men and women carry such a program to its conclusion?

PROFITEERING BY RETAIL MERCHANTS AND ITS DANGERS

The present high prices of food products and clothing, as well as of other things held essential to comfortable living, and an equitable lowering of such prices by retail merchants, present a problem to the American people that is full of peril. The spirit of unrest that has manifested itself in a number of European countries, is felt in America, and grows, in no small degree, out of the feeling that profiteering of retailers, as well as of producers, especially of the trusts, has reached an unbearable point.

Our attention has been called to a particular instance which, we think, needs explanation.

On December 5, Superintendent Olson, of the Swedish Hospital, of Minneapolis, pointed out, in a letter to the *Evening Journal,* a case of gross profiteering by the manufacturers of glycerine, which is a by-product of the meat-packing houses, and is used in the manufacture of ammunition. The price to be paid for it by the Government during the month of December, had the war continued, had been placed at 56 cents a pound. When the war closed a circular was issued giving the price to hospitals at 25 cents a pound. Superintendent Olson pronounced the former prices to the Government gross and disloyal profiteering.

This letter called the attention of a man in the LANCET office to the price he had paid for a *pint* of glycerine the previous day at one of the large city department stores (the L. S. Donaldson store, generally called the "Glass Block"). This price was $1.85. At a subsequent inquiry the price was given at $2.00. As glycerine was then quoted for sale to hospitals, which are comparatively small consumers, at 25 cents per pound, or 31 cents per pint, the purchaser of this common household commodity felt himself the victim of profiteering.

Careful inquiry as to the prices charged for a pint of glycerine in other stores was then made, two inquiries being made of each store. One inquiry was made in person at the store and one by telephone in each case. Here are the astonishing prices attained for a pint of glycerine at a time when it could be purchased by hospitals in comparatively small lots (550 lbs.) at 31 cents a pint:

L. S. Donaldson Co., $1.85 and $2.00.
Powers Mercantile Co., $2.00.
Voegeli Drug Store, $2.00.
The Owl Drug Store, $1.50.
Circkler's Drug Store, $1.25.
Washburn's Drug Store, $1.00.

The last-named store is in a residential district of the city, and no one in the LANCET office is acquainted with anyone in the store, so the price given was the actual retail price asked by the store.

We believe the above facts show an intolerable condition as to the prices of many of the common household articles, and that socialism, in its worst form, is spread by agitators who point to this condition.

Nothing but pitiless exposure of the profiteers by the press will stop it. Will the press of the country rise to the occasion?

MISCELLANY

RESUSCITATION

The Third Resuscitation Commission, of which Dr. S. J. Meltzer, of the Rockefeller Institute, is president, and Dr. Reid Hunt, of the Harvard Medical School, is secretary, met in New York in mid-summer at the Rockefeller Institute, to discuss modern methods of resuscitation. An abstract of its proceedings and conclusions has just been furnished the press. The resolutions setting forth its main findings are given herewith:

RESOLUTIONS ADOPTED BY THE COMMISSION

In the discussion following the presentation of methods and evidence to the Commission the following important facts were emphasized:

1. That in most accident cases no resuscitation apparatus is at hand for immediate use.
2. That reliance upon the use of special apparatus diminishes greatly the tendency to train persons in the manual methods and discourages the prompt and persevering use of such methods.
3. That police officers or physicians often interfere with the proper execution of manual methods, in that they direct that the patient be removed in an ambulance to some hospital, thus interrupting the continuance of artificial respiration.
4. That in many hospitals the members of the staff are not all acquainted with the methods of artificial respiration.
5. That in medical schools instruction is not properly provided for students in the manual methods of artificial respiration.

In view of these facts the following resolutions were adopted by the Commission:

1. The prone-pressure or Schäfer method of resuscitation is preferable to any of the other manual methods.
2. Medical Schools, Hospitals, Fire and Police Departments, the Army and Navy, First Aid Associations, and Industrial establishments in general, should be urged to give instruction in the use of the prone-pressure method of resuscitation.
3. Individuals who, from accident or any other cause, are in need of artificial respiration, should be given manual treatment by the prone-pressure method immediately on the spot where they are found. It is all important that this aid be rendered at once. The delay incident to removal to a hospital or elsewhere may be fatal, and is justifiable only where there is no one at hand competent to give artificial respiration. If complications exist or arise, which require hospital treatment, artificial respiration should be maintained in transit, and after arrival at the hospital, until spontaneous respirations begin.
4. Persons receiving artificial respiration should, as much as possible, be kept warm and the artificial respiration should be maintained till spontaneous breathing has been permanently restored, or as long as signs of life are present. Even in cases where there is no sign of returning animation, artificial respiration should be kept up for an hour or more.
5. A brief return of spontaneous respiration is not a certain indication for terminating the treatment. Not infrequently the patient after a temporary recovery of respiration stops breathing again. The patient must be watched and if normal breathing stops. the artificial respiration should be resumed at once.
6. Artificial respiration is required only when natural respiration has ceased. In cases of simple unconsciousness from any cause in which natural respiration continues, artificial respiration should not be employed without medical advice.
7. The Commission recommends that in cases of gas asphyxiation, artificial respiration, whether given by a manual method or by special apparatus, should be combined when possible with the inhalation of oxygen from properly constructed apparatus.
8. With regard to the employment of mechanical devices for artificial respiration the Commission feels that it ought not at present to take a definite stand either for or against any particular form of apparatus. However, the Commission recommends, that the use and installation of apparatus should be confined, for the present, to properly equipped institutions under medical direction. The Commission recognizes the great need of simple devices capable of performing artificial respiration reliably and efficiently. It therefore recommends a careful study of the problem, directed toward *the development of a reliable method appropriate for general adoption.* Such studies can best be carried on in properly equipped hospitals and laboratories which offer opportunities and facilities for critical observation and experimentation.

In view of the importance which the knowledge of proper methods of resuscitation possesses for public health and safety and considering the fact that many practitioners, members of hospital staffs and graduates of medicine are not thoroughly familiar with the methods of resuscitation, especially that of the prone-pressure method, the Commission recommends:

(a) That medical journals (and other scientific and practical journals which are interested in the problem

of resuscitation) be asked to publish the resolutions adopted by the Commission.

(b) That a copy of these resolutions be sent to the medical colleges with a request that proper instruction in this subject shall be arranged for in the college schedules.

(c) That these resolutions be sent to as many hospitals as possible, with the recommendations that members of the house staff shall familiarize themselves with the methods of resuscitation.

(d) In order that the resolutions of the Commission may be brought to the attention of interested circles (fire and police departments, industrial plants, etc.), it was agreed that they be communicated to the Associated Press (by the National Electric Light Association).

It was voted that the Third Resuscitation Commission should be properly organized and continue its existence, ready to respond when requirements arise. The following officers were elected:

President, Dr. S. J. Meltzer.
Vice-President, Dr. Yandell Henderson.
Secretary, Dr. Reid Hunt.
Treasurer, Mr. W. C. L. Eglin.

It was voted to appoint a committee for the collection of verifiable data relating to resuscitation. The President appointed to the committee as follows:

Dr. D. Edsall, Chairman.
Dr. Reid Hunt, Secretary.
Prof. Elihu Thomson and the President ex-officio.

NEWS ITEMS

Dr. W. J. Moore has moved from Wood Lake to Adams.

Dr. W. C. Dietrick has moved from Waverly to Truman.

Dr. M. P. Morse has moved from Le Roy to Minnesota Lake.

Dr. O. B. Nugent, of Harvey, N. D., has moved to Chicago.

Dr. F. D. Brandenberg has moved from Hartland to New Richland.

The new Kaufman Hospital building at Appleton was opened last week.

Dr. James O. Lee has moved from Lake Morden, S. D., to Pierre, S. D.

It is now thought that the Minneapolis public schools will open next week (January 6th).

The *Medical Review of Reviews* of New York has purchased the *Buffalo* (N. Y.) *Medical Journal.*

Of the 132 children in the schools of Edmore, N. D., only 21 were found without defects when examined by a visiting nurse.

The postponed annual meeting of the Southern Minnesota Medical Association will be held at Mankato on the 20 and 21 inst.

Miss Dora M. Eggen, a student nurse of St. Luke's Hospital, St. Paul, died last month from complications following influenza.

The contract for a new building of the Glen Lake (near Minneapolis) Sanatorium has been let. The building will cost $250,000.

Dr. G. H. Giroux, of Dalton, has begun a special six-months course in pediatrics at Medical School of the University of Minnesota.

Miss Effie A. Larsen, a graduate of the School of Nursing of the University of Minnesota, died last month of influenza pneumonia at Camp Dodge, Iowa.

Dr. C. J. Ringnell, of Minneapolis, has returned from a vacation trip of three months, during which he visited hospitals and camps in the East and West.

Major A. T. Mann, of Minneapolis, was reelected secretary-treasurer of the Western Surgical Association at its annual meeting held in Chicago last month.

The mayor of Duluth is maturing plans for the erection of the $600,000 hospital made possible by a bequest of that amount from a former resident of the city.

Dr. B. H. Sprague, superintendent of the Sprague Hospital, of Huron, S. D., has returned from the service, and begun active work as the head of the hospital.

"The End of the Road," the motion-picture film being exhibited by the Social Hygiene Division of the Minnesota State Board of Health, is attracting crowded houses.

For some weeks the headlines of the newspapers of the Northwest have sung a monotonous song of "The Ban on Again," with its variation, "The Ban off Again."

Capt. C. C. Leck, of Austin, has been transferred from the Port of Embarkation, New Jersey, to the U. S. Hospital in Brooklyn, where he is chief of the surgical service.

Major Kenneth Taylor, of St. Paul, has been appointed commander of the Blake Hospital No. 1 in Paris, succeeding Dr. Blake, its founder, who will devote his time to consultation work.

The Women's Auxiliary of the St. Louis County Medical Society has been doing active charity work, including the furnishing of clothing, Christmas presents, etc., for the poor of Duluth.

Dr. W. W. Will, of Bertha, has been appointed a member of the Wadena-County Sanatorium commission, to take the place of Dr. F. H. Knickerbocker, of Staples, whose term expired last month.

Dr. Benjamin Thomas, of Huron, S. D., has gone East to do postgraduate work. Dr. C. A. Hall, of Huron, will be temporary superintendent of the County Board of Health, in place of Dr. Thomas.

Dr. E. J. Huenekens, of Minneapolis, who had volunteered to do special work for the State Board of Health in children's diseases, has resumed his private practice because of changed war conditions.

Dr. Luther A. Rexford, of Minneapolis, died last month, at the age of 36, of pneumonia following influenza. Dr. Rexford was a graduate of the Minneapolis College of Physicians and Surgeons, Class of '07.

Major J. P. Aylen, of Fargo, who is now at home, and who crossed the ocean four times while in the transport service, contributed an exceedingly interesting account of his work to the *Fargo Forum* of Dec. 23rd.

The forthcoming Biennial Report of the Minnesota State Board of Health will show that Minnesota ranks third among the states in the efficiency of its health work but sixteenth in per capita expenditures for health purposes.

The Surgeon General's Office has made a ruling which will relieve at once all doctors in the service who have been on duty for one year, all who can show that they are needed at home, and all who are over forty-five years of age.

Dr. Charles H. Keane, who has been Director of Hygiene in the Minneapolis public schools for several years, has accepted a position under the Government as supervisor of the physical training and the physical education of wounded men.

The Woman's Auxiliary of the Hennepin County Medical Society gave a reception last month at the residence of Mrs. Dr. E. Z. Wanous to the inmates of Hopewell Hospital. It was a beautiful and cheering affair.

Drs. Earl R. Hare and H. B. Sweetser, of Minneapolis; Dr. Arnold Schwyzer, of St. Paul; Dr. E. S. Judd, of Rochester, and Dr. W. H. Magie, of Duluth, read papers at the recent meeting of the Western Surgical Association held in Chicago.

We regret that we cannot obtain a complete list of the medical men in Minnesota and adjoining states who cheerfully accepted, as they all did, assignments to work in districts stripped of physicians by the war. No service could be greater than this.

The Minnesota State Board of Health repealed, in December, the prohibition of public funerals and other gatherings, but it still discourages meetings that attract people from different sections with the tendency of such meetings to carry the influenza from place to place.

The medical men of the Northwest who have been in active service, in home camps or abroad, are coming home in large numbers, many of them resuming practice where dropped, but many seeking new fields. Many villages in the Northwest now need, and may long need, physicians.

Dr. J. H. Rowe, secretary of the North Dakota State Medical Association, while doing volunteer work on account of the influenza epidemic, had a field 35 wide by 60 miles long, where there was not another physician. Almost continuous day and night riding for weeks was the experience of this young (?) physician.

Dr. L. C. Jurgens, of Rapid City, S. D., easily won on all points the case of malpractice brought against him by a patient who called him too late to save an eye badly injured on a nail. Miracles of saving often go unrewarded, while failure to perform a miracle may follow a bill for services of the highest professional character.

Minneapolis is attracting wide attention by its success in reducing the infant-mortality of the city. In a crowded Polish section of the city not a single infant death occurred during the month of August. Infant-welfare work, done mostly by the social workers of the city, obtained this magnificent result. Truly, health is purchasable.

At a recent meeting of the Minnesota Academy of Ophthalomolgy and Oto-Laryngology in Minneapolis the following officers were elected: President, Dr. J. D. Lewis, Minneapolis; first vice-president, Dr. E. R. Bray, St. Paul; second vice-president, Dr. A. J. McCannell, Minot, N. D.; secretary-treasurer, Dr. John Morse, Minneapolis.

In the official report of a joint meeting of the city and county board of health at Lewiston, Montana, two causes are given for the larger per cent of deaths in the present epidemic, as follows: "Either the patient went to bed too late

or got up too soon." A recommendation was made to keep open the public schools because the children are better protected under supervision than when at large.

Dr. George D. Rice, of St. Cloud, and formerly of Pipestone, entered the Medical Reserve Corps as lieutenant in 1917. He was later promoted to the rank of captain, and last month he gained the rank of major. He has been in much of the heaviest fighting of the war, in such places as Chateau Thierry, Belleau Wood, and St. Mihiel. Major Rice is a graduate of the University of Minnesota Medical School.

Dr. Francis D. Patterson, Chief, Division of Industrial Hygiene and Engineering, Department of Labor and Industry, Harrisburg, Pa., is desirous of obtaining a complete list of all physicians engaged in the practice of industrial medicine. This Department holds a semi-annual Conference of Industrial Physicians and Surgeons every year. These Conferences are well attended, and a great deal of valuable matter is presented in the discussions. In order to reach all physicians interested it is desirable to have their names on the mailing-list. The next Conference will be held early in 1919, and it is, therefore, essential that the names and addresses of all Industrial Physicians and Surgeons be in my hands as soon as possible after January 1st.

PUBLISHER'S DEPARTMENT

E. R. SQUIBB & SONS

When the name "Squibb" follows the name of a therapeutic agent, such agent is recognized by the medical profession as prepared in a thoroughly scientific manner, and as absolutely safe so far as its preparation is concerned. "Squibb" means 18 carets fine.

The "Liquid Petrolatum-Squibb" is the highest possible grade of petrolatum—its refinement is perfect.

This high praise has been justly earned by the house of E. R. Squibb & Sons.

NOVOCAIN

The H. A. Metz Laboratories announce that the supply of Novocain, in all forms, can now be assured to the medical profession through the regular channels and in any quantity desired. For some time past the Government has used almost the entire output of the Metz Laboratories, which are producing Novocain and other products of the highest scientific character with a degree of success in the technic of manufacture never surpassed in any of the laboratories of Europe, and anything they put upon the market is dependable.

THE MUDCURA SANITARIUM

The above institution is the child and the pride of its medical director, Dr. H. P. Fischer, who is well known to most Minnesota physicians as a highly successful practicing physician of many years' standing, and a man capable of organizing, building up, and conducting this modern sanitarium of 100-patient capacity.

Dr. Fischer's home physician, Dr. G. P. Dempsey, is equally successful in his sphere of action. and it can truthfully be said of the Mudcura Sanitarium that it is one of the most successful institutions of its kind in America or abroad.

Its home is a beautiful spot; and its winter service is but little, if any, behind its summer service.

ATOPHAN

Gout and articular rheumatism are two of the most difficult diseased states physicians have to combat. Colchicum and the salicylates are often temporarily effective, but they create other conditions that render them undesirable as therapeutic remedies for the conditions named.

Atophan, on the other hand, produces even better results in each disease, and is entirely free from after-effects and by-effects of colchicum and the salicylates.

Atophan is manufactured by Messrs. Schering & Glatz, whose reputation is a guarantee that its place in drug therapy cannot be questioned. It is put up in both tablet and powder form.

HEMAGULEN

By supplying to shed blood one of the necessary physiological constituents to the formation of a clot it is possible to hasten blood coagulation. Hemagulen, a product of the Lilly Laboratories, contains this necessary thromboplastic substance from fresh brain tissue. It is sterile, and is suspended in a physiological saline solution and preserved with 0.3 per cent cresol; it is tested

physiologically and standardized. Hemagulen is indicated in persistent hemorrhages from capillaries and small vessels where it can be applied to the bleeding surface. It is also given orally in doses of two to eight drams, diluted with water, in cases of hemorrhages from gastric and duodenal ulcers. The drug trade supplies Hemagulen in ounce bottles.

THE BEEBE LABORATORIES

The growth of the Beebe Laboratories of St. Paul has been very rapid, but entirely substantial. It has been rapid because of the excellence of its work and the wide recognition of this fact, giving it an almost national field. It has been rapid also because the progress in medicine during the past decade has been along laboratory lines, made possible by public laboratories conducted by expert scientific men.

The Beebe Laboratories are now doing an extensive work in autogenous vaccines, in which line exceedingly remarkable results are often obtained, to the equal gratification of the physician and his patient. It is only the truly high-grade laboratories that get satisfactory results in this line of work, for it requires a well-nigh perfect technic.

Dr. Beebe solicits your correspondence, and, we are sure, there are few physicians who cannot profitably work along this line and get valuable assistance from the Beebe Laboratories.

GRAY'S GLYCERINE TONIC COMP.

Dr. Gray's formula for a tonic is one of a few formulæ that have received almost universal recognition by the medical profession, whether the preparation is prescribed in the form put up by the Purdue, Frederick Co. or the "cross-roads" druggist residing in the big city or in the sparsely settled country.

As put up by the original, who are the present, manufacturers of the preparation, this tonic is an elegant one, exceedingly pleasing to the patient. As put up by the druggist, it is wholly unacceptable to the patient. Now, no one has ever contended that the manufacturers depart one iota from the formula given on every package, but a few doctors stick to a druggist's preparation, without once questioning either his ability or the scrupulousness of his pharmaceutical work.

A cheap phonograph may be called a "Victrola," but its voice will never be mistaken for that of a Caruso or a Melba. It is well to prescribe Dr. Gray's preparation if the formula commends itself to you.

THE NORTHWESTERN HOSPITAL OF MINNEAPOLIS

The layman forms his opinion of a hospital from the character of its staff and the atmosphere given it by its superintendent and corps of nurses; and his opinion is generally wellnigh infallible. At all events, it determines whether a hospital shall have a large influence in the community life, enjoy a large patronage, and do a successful work.

It is because the Northwestern Hospital of Minneapolis can meet, and always has met such tests, that it is one of the most successful hospitals of the Northwest. Its staff is one that can be drawn together only from the profession of a large city, and only then when the institution itself has high standing. The medical and surgical staff of the Northwestern Hospital is unexcelled by any other hospital staff in the Northwest; and its Board of Directors, composed of many of the city's most high-minded, philanthropic, and energetic women, has done a nobler work for the institution, and has created a loyal staff in highly trained nurses and hospital assistants, all under the management of an unusually successful hospital superintendent, Miss A. Jeanette Christianson, from whom any desired information about the hospital's work may be obtained.

THE VICTOR ELECTRIC CORPORATION

The general physician who installs an *x*-ray laboratory, and maintains it up to a standard as high as his own standard in general practice, cannot fail to see pleasing results in almost innumerable cases in which only unsatisfactory results had been obtained.

A good general and electrical laboratory is profitable in many ways. It both inspires and enables any physician to do better work. It gives him a higher standing in his community. It gives, as it properly should, larger financial returns.

A good and fairly complete laboratory is within the reach of almost every physician, for it will soon pay for itself.

The Victor Electric Corporation, with its Northwestern office in the La Salle Building, Minneapolis, will be glad to give any physician the fullest and best of advice, to equip his office according to his requirements as determined by his field, and to train him in the use of any appliance he wishes to install.

At present the Corporation is making some very attractive offers of used apparatus which is just as good as new.

It pays to be up to date, even though "up to date" be a hackneyed term.

THE NATIONAL PATHOLOGICAL LABORATORIES

As indicated by the title of the above-named institution, it now is practicable for a high-grade laboratory to offer its services to every physician in America by having one or more branch houses. The *National* is such a laboratory, and it has been highly successful. Whether one deals with the main or a branch house he receives the benefit of the methods established and maintained in the main house; and so in dealing with any one of the National Pathological Laboratories, the physician knows the highest possible grade of work is done for him.

It is well-nigh, if indeed not fully, discreditable to a man to practice medicine in any section of the country without a laboratory of his own or being in constant touch with one. The day has gone by for dealing with one's patients in any other may. The laboratory is not enough in itself in the diagnosis and treatment of disease, but it is an indispensable part of the work of every physician who claims to practice modern medicine.

If you do not know the National Pathological Laboratories, a letter will serve to introduce yourself, and the acquaintance will be profitable to you and may be life-saving to some of your patients. Write these laboratories at once, addressing the Chicago, New York, or St. Louis office.

CONSERVATIVE TREATMENT

Medicine is indebted in many ways to the general practitioner, whose opinions, based upon practical experience, often serve a useful purpose in checking up or proving the more theoretical and perhaps more scientific teachings of the specialist. For example, the tendency to operate upon almost every kind of gynecological condition has given way to a more conservative practice, and it has been realized and proven that many conditions can be materially aided, if they cannot be entirely cured, by medicinal treatment properly employed.

Seven decades ago, a medicinal preparation having for its best a marked astringent drug together with a recognized antiseptic drug and further medicated to ensure antiphlogistic, soothing, and healing properties, was introduced to the medical profession, under the name of Micajah's Wafers. The product won prompt recognition, and has steadily increased in use. Micajah's Wafers are designed especially to relieve irritation, reduce inflammation, soothe pain and soreness, and check hyper-secretion in inflammatory conditions, acute or chronic, of mucous membranes.

They can be used in solution, as an efficient gargle for the relief of sore throat, tonsillitis, etc., or so supplied as to be conveniently used in vaginitis, leucorrhea, cervical crosion or ulceration, or made into a powder and applied to old, indolent leg ulcers.

There are in fact numerous indications for the employment of this product which have been carefully described in attractive literature which, together with samples of Micajah's Wafers, will be sent to any physician on request. Micajah & Co., Warren, Pa.

THE DUPLEX FIRELESS STOVE

The so-called fireless cooker has now reached a point in its mechanical make-up that renders it practically perfect. Its thorough insulation, its construction of aluminum, its aluminum vessels, its double baking and roasting disks of soap-stone, its steam-valve, and its general neatness and compactness, together with what it will do, make it a universal household necessity.

It saves both labor and fuel, thereby paying for itself in a short time; and it cooks most articles of food in a manner much better than they can be cooked with gas, coal, or wood under ordinary conditions. The cereals, especially oat-meal, are cooked in this stove over night with absolutely no attending and they are made far more palatable and digestible by such cooking. The plainer and cheaper cuts of meat, and especially of grass-fed animals, cooked in this way are rendered, in taste and tenderness, equal to the very best cuts, even of the better grades of meat.

Practically all vegetables should be cooked in a fireless stove, for such cooking renders them more tender and nutritious than when cooked in the usual way.

Bread and rolls and potatoes can now be baked in this way with the use of the disks. And all this is done with a minimum of attention and cost.

A cooker has been in almost daily use in the writer's family for fifteen years; and it is a common occurrence to have guests at the table comment on the superiority of the cooking of various items of food on the table, asking why they taste so much better than when cooked at their homes and in the hotels. The answer is always the fireless cooker.

These cookers cannot be praised too highly. One should be in every hospital and in every home; and when once used they will be appreciated. We believe the Duplex Fireless Stove, which is described in our advertising columns, is the best fireless cooker on the market.

THE
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SACROPUBIC HERNIA—PROLAPSUS UTERI*

BY CHESTER M. CARLAW, M. D.,
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MINNEAPOLIS

"Prolapsus uteri" is an erroneous terminology. The term is perpetuated by our text-books on gynecology by considering the subject under affections of the uterus, which would lead one to believe that the condition is initiated by some change in the uterus. There is no doubt that some change takes place in the length of the uterus as a result of the downward displacement. This change, however, is a secondary one, and does not cause the lesion, which is really a sacropubic hernia in which the entire displaceable segment of the pelvic floor, i. e., the uterus with its appendages and bladder, is drawn down by various etiological factors.

In order better to comprehend the nature of prolapse and its pathological relations, it is necessary to review, briefly, the anatomy and physiology of the parts concerned.

The chief supports maintaining the uterus and other pelvic viscera in their normal position and horizontal level are the muscular and fascial structures which close the pelvis below. These structures are arranged in two groups, one of which lies at a deeper level than the other. The superficial group forms part of the anatomical perineum.

The deep group of musculofascial structures constitutes the pelvic diaphragm, and it is with this part of the anatomy we are chiefly concerned. As we all know, the muscles here are the levator ani and the coccygeus.

The Levator Ani.—This is a thin sheet of muscular fibers which form the anterior and the greater part of the pelvic diaphragm. It has three seats of origin. The anterior fibers spring from the back of the pubes; the posterior fibers spring from the pelvic surface of the ischial spine; and the intermediate fibers form the bulk of the muscle, and arise from the so-called "white line" of the pelvic fascia. The muscle passes downwards, and, with its fellow on the opposite side, ensheaths the lower end of the vagina and rectum. They are inserted into the sides of the coccyx and the median raphe.

The Coccygeus.—This is a small triangular muscle, which lies behind but upon the same plane as the levator ani. It arises by a narrow origin from the pelvic surface of the ischial spine and the parietal surface of the pelvic fascia above the spine. It expands as it passes inwards to be inserted into the side of the coccyx.

Morphologically these muscles represent the powerful tail muscles of apes and other lower animals. In man they have lost their original function, and are of course much less powerfully developed. Their function in man is to oppose any sudden increase in intra-abdominal pressure, such as occurs from violent muscular efforts, such as coughing, sneezing, and the act of defecation.

Pelvic Fascia.—The pelvic fascia is the most

*Read before the Minnesota Academy of Medicine, February, 1918.

important structure in maintaining the pelvic viscera in their normal position. It is continuous from the iliac and transversalis fascia above. It lines the circumference of the pelvis, from the pubes in front to the sacrum behind, in one continuous layer, passing behind the internal iliac vessels, but in front of the sacral plexus of nerves. From the upper posterior surface of the arch of the pubes in front to the spine of the ischium behind, this fascia is much thickened, forming the so-called "white line," which shuts off the ischiorectal fossa from the pelvic cavity. The fascia here divides into parietal and visceral layers.

The parietal layer continues downward as the obturator fascia, covering the inner surface of the obturator internus muscle, and so lines the outer

Fig. 648.—Diagram of the Pelvic Fasciæ.

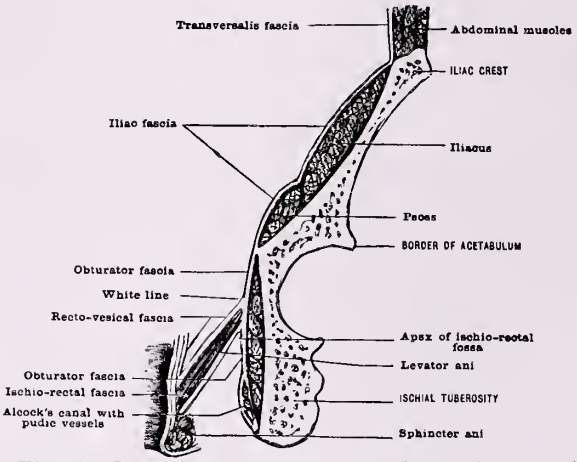

Fig. 1. Diagram showing lines of attachment of the fasciæ and muscles of the pelvis.—From Morris and Lond.

wall of the ischiorectal fossa. The portion of the parietal fascia covering the rami of the pubes unites with its fellow from the opposite side, enclosing the upper portion of the angle between the rami of the pubes, thus forming the inner layer of the triangular ligament, which is perforated by the urethra and the upper part of the vagina.

The visceral layer of the pelvic fascia passes inwards, and splits into two parts. The upper part forms the rectovesical fascia, and covers the upper or visceral surface of the levator ani muscle beneath the peritoneum. The lower portion is the ischiorectal fascia, and covers the lower or parietal surface of the levator ani muscle, and therefore lines the inner wall of the ischiorectal fossa.

In addition to these layers of the pelvic fascia, the cervix and the vaginal vault have a specialized attachment of their own, a strong fibrous tissue which invests the uterine vessels in their course across the pelvic at the level of the internal os. This sheath is a very important factor in preventing descent of the uterus.

Further, there is a well-formed band of fibrous tissue at this level, which is known as Mackenrodt's ligament, or the transverse ligament of the cervix. This ligament follows the line of the uterine vessels, but at a lower level, and is continuous with their fibrous investment. Externally it is continuous with the strong fibrous sheath of the vessels and with the strong fibrous band which enters the pelvis through the sciatic notch. Internally it is attached to the sides of the cervix, the sides of the vaginal vault, and the sides of the urethra and bladder. It is a well-known fact that in removing the uterus per vaginam the cervix cannot be drawn much below

Fig. 650.—Diagram showing Lines of Attachment of the Fasciæ and Muscles of the Pelvis.

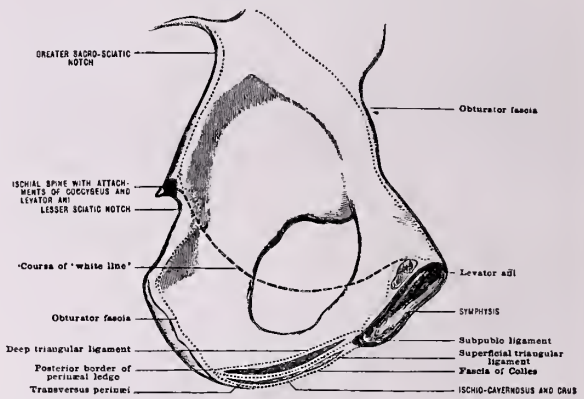

Fig. 2. Diagram of the pelvic fasciæ.—From Morris and Lond.

its level until these structures at the sides have been divided. Injury to these structures from over stretching or from lacerations in child-birth will seriously impair their efficiency in maintaining the uterus at its normal level, causing them to yield before the force of intra-abdominal pressure, thus allowing prolapse.

The peritoneal ligaments on either side of the uterus are, morphologically, of the nature of a mesentery; they carry the blood-vessels and nerves of the organ.

The uterosacral and uterovesical ligaments appear as lax folds, which under normal conditions will allow of the uterus being drawn up to or through an abdominal incision without much force; therefore they can by no means be regarded as supports which sustain the uterus at a constant level.

The round ligaments, developmentally, cor-

respond to the gubernaculum testis of the male. Their function is developmental only, and they serve no definite purpose in the adult, as they do not, as formerly believed, exert any influence upon the position of the uterus. They can, however, be made serviceable by the surgeon, who derives from them a useful artificial uterine support.

Position of the Uterus.—The uterus is an organ which, by reason of its anatomical relations and on account of the remarkable enlargement which it undergoes during pregnancy, requires loose attachments and a correspondingly wide range of normal mobility. Great difference of

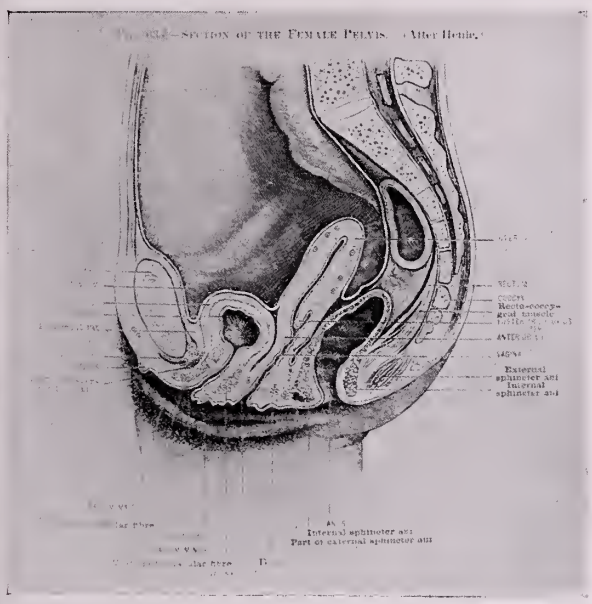

Fig. 3. Section of the female pelvis. (After Henle.) —From Morris' Anatomy.

opinion amongst anatomists as to its normal position exists. Baune, Luschka, Curvulkin, and Henle consider the uterus normal in position with the fundus in the hollow of the sacrum. Claudine says the uterus is normal in position only when, with its broad ligaments, the posterior surface touches the sacrum as closely as the lungs do the ribs.

Almost all gynecologists, however, agree from clinical observations that the body of the uterus lies over the bladder with the internal os looking more or less backward, although the long axis of the uterus and the long axis of the cervix are not the same, but form an obtuse angle, with the concavity in front, of about 160 degrees. This curve plays an important part in the support of the uterus, which in the standing posture rests upon the pubes, the bladder intervening, while in recumbency it stands nearly vertical on the structure, lying in the hollow of the sacrum. In the fetus the uterine axis forms a straight line.

A line extending from the tip of the coccyx to the umbilicus is generally given as the normal axis of the uterus. The writer would make the assertion that the anteroposterior position of the uterus is a matter of little importance. Its posterior positions are unaccompanied by symptoms unless associated with inflammatory changes or prolapse; therefore do not call for surgical interference. If, however, they are associated with inflammatory changes or prolapse they are pathological, and may require surgical attention. This statement is made because a few months ago a surgeon told the writer he had in one month operated upon twelve cases of retrodisplacement of the uterus. All of these cases came from one in-

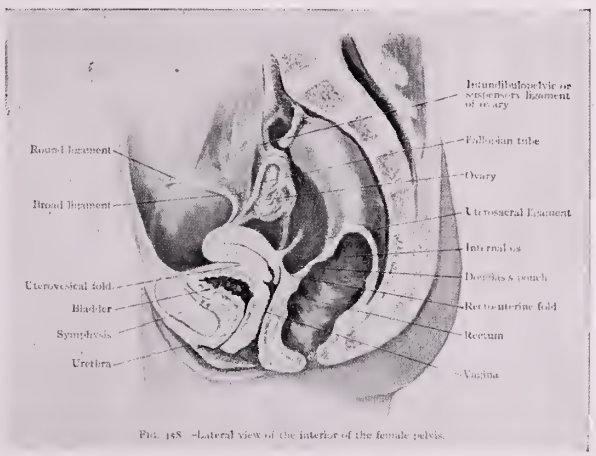

Fig. 4. Lateral view of the interior of the female pelvis.—From Davis' Anatomy.

stitution, where the total number of female employes has never exceeded three hundred. These cases were all referred to him by the medical guardian of the firm. Of the twelve patients only one was married, and she had two children.

The inferior or lower position of the uterus in the pelvis is more constant and important. It corresponds with a line drawn between the two ischial spines, which is the level of the cervix.

Etiology.—We have seen that the uterus is maintained at its normal level in the pelvis by the pelvic diaphragm and supplementary fascial bands attached to the cervix and the vaginal vault; therefore injury to these structures from overstretching or from lacerations in child-birth will seriously impair their efficiency, causing them to yield before the force of intra-abdominal pressure, and thus allow prolapse.

Sometimes lacerations sufficient to impair the function of the pelvic floor have existed for years in women leading an active physical life without prolapse, but many of these cases, although the pelvic organs are held in position by supports that are sufficient to resist ordinary taxation for a given time, are not able to do so under extraordinary pressure for any length of time.

Prolapse is due to the weakening, more or less, of the whole retentive apparatus, for such is the reserve power of the various constituents that failure of one group alone is insufficient to allow descent, if the other remains healthy. Thus absolute flaccidity of the upper supports is constantly seen with retroversion, but without prolapse; and extensive cystocele and rectocele due to laceration of the perineal body co-exist with the uterus in normal position.

Displacement of the pelvic contents does not follow injury to the maintaining structures immediately, but comes on slowly, usually not until after the menopause, when atrophy of the muscular tissue and absorption of fat so interfere with the normal tone and fullness of the tissues as to be a factor in allowing prolapse.

When the integrity of the pelvic floor is destroyed sufficiently to permit the uterus to fall backwards to the extent that its long axis corresponds with the vaginal axis, descent through the vaginal canal becomes more likely.

Prolapse of the uterus has been seen at birth and occasionally in young virgins. In these cases the deformity is due to congenital deficiency of the sustentacular apparatus. Theoretically, increased weight should favor prolapse, but, as a matter of fact, in many cases the uterus is smaller than normally.

Clinical Features.—Three degrees of prolapse of the uterus are recognized:

1. Where the cervix is still within the vagina.
2. Where the cervix protrudes from the vagina.
3. Where the whole uterus protrudes from the vagina, the latter canal being turned inside out.

The most important clinical feature of prolapse in the majority of cases is that it incapacitates the patient for leading an active life. Pain is most frequent during the early stages; but in slight cases a feeling of weight or bearing down is frequently the only symptom. In the majority of cases, however, there is a constant dragging pain, aggravated by standing or walking or by muscular efforts.

In almost all cases of cystocele the sphincter of the bladder is weakened, and slight dribbling incontinence occurs on coughing or other muscular exertion.

It must be remembered that except in extreme cases prolapse disappears in the recumbent posture, and in that position will become evident only when the patient strains. In most cases the full extent of the displacement will appear only when in the erect position. Hence the diagnosis should be made with the patient standing.

If we observe a case of complete prolapse being reproduced by the patient straining, the order of descent will be as follows:

1. The anterior wall of the vagina, from below upwards, will pass down and out at the vaginal orifice.
2. The cervix uteri will next appear.
3. The posterior vaginal wall from above downwards comes last.

Treatment.—In former times pessaries were depended upon to treat prolapse of the uterus. Prolapse of the uterus, however, does not permit of spontaneous recovery, but tends to become aggravated with advancing years. Treatment by pessaries or tampons depends upon putting the vaginal tissues upon the stretch and thus supporting the uterus. Such treatment must, therefore, after a time outlive its usefulness and render the condition worse. In advanced cases of prolapse unsuited for operation because of the age or decrepitude of the patient, or of the presence of organic visceral or general disease, as well as where operation is refused, pessary treatment may become the treatment of necessity.

Operative treatment is always the treatment of choice. It is curative in effect, and is attended with comparatively little risk in the hands of a skilled operator, even though the patient be well advanced in years.

The operations for the cure of prolapse are so numerous as to be confusing to the young surgeon, and convincing to the experienced that the perfect operation has not yet been brought forward. The best results, however, have been obtained by the operations which make use of the abdominal walls for support.

The writer will confine himself to two operations which in his experience have given satisfactory results.

Operation for Minor or First-Degree Cases.—These cases are usually met with in women still in the child-bearing period or before the menopause. In this operation the round liga-

ments are made use of, after the manner of Simpson's modification of the Alexander-Adams operation. It is a retroperitoneal shortening of the round ligaments by the intra-abdominal route. The perineum is first thoroughly repaired, the uterus curetted, and the cervix repaired or amputated if necessary. The abdomen is opened in the median line, and any pelvic pathology which may be present is given attention, as is also the appendix, should attention be required. The uterus is drawn up and the round ligaments on each side are grasped with hemostatic forceps about an inch and a half from the uterus. The skin and superficial fascia on each side of the lower end of the abdominal incision, are then dissected up from the aponeurosis for a distance of one and a half to two inches. The aponeurosis is wiped clean of fatty particles with gauze to insure firm adhesions. Then a long, small-pointed curved forceps is plunged through the abdominal wall in the region of the internal abdominal ring, into the broad ligament. The abdominal wall on this side is then elevated by an abdominal retractor for the purpose of tightening the broad ligament and enabling the operator to observe the next step, which is pushing the forceps along, between the peritoneal folds of the broad ligament, to the point where the hemostat is on the round ligament; and here it is made to penetrate the perineum and grasp the round ligament. The forceps is then withdrawn with the round ligament in its bit. This round ligament stump is then spread out fan-shaped and anchored to the aponeurosis of the external oblique muscle by three No. 1 chromic catgut sutures; and the opposite side is similarly treated. The abdominal incision is then closed, and in cases where the abdominal walls are very fat, or where there has been much oozing, a small piece of rubber tubing is pushed through the skin sutures on either side down to the stump of the round ligament and left for a couple of days.

Operation for Prolapse of the Second and Third Degree.—These cases must, of necessity, require a more powerful fixation for their support than can be obtained from the round ligaments; therefore the uterus itself is made use of, and is fixed in the abdominal wall. It is an extraperitoneal fixation of the uterus by a modification of Kocher's exohysteropexy. The perineal repair should, if possible, precede the abdominal work; but if, for any reason, it is not advisable to prolong the operation for a sufficient length of time for its completion, this preliminary work may be dispensed with or postponed until some time later. In this operation the uterus, bladder, and vagina are permanently held in place. It is a simple and secure means of curing precedentia. It is the operation of choice in women beyond the menopause.

The abdomen is opened by a median incision and the fundus of the uterus is grasped with a vulsella forceps and brought out through the opening until the cervicocorporal portion is clearly in view. If the uterine appendages are normal, the round and broad ligaments are clamped on either side and cut free from the body of the uterus. The stumps are then ligated, and their ligatured ends buried in the broad ligaments close to the cervix. If, however, the tubes or ovaries are diseased they are removed. The peritoneum is then sutured around the circumference of the cervicocorporal portion of the uterus a short distance above the pubes, so as to leave room for bladder expansion. The portion of the peritoneum above and below the uterus is then sutured, thus closing the peritoneal cavity.

The muscle fibers of the recti are brought in contact with the uterus and held there by one or two loosely tied, plain gut sutures. Lastly, the aponeurosis is sutured to and over the uterus with chromic No. 1 doubled, the skin and subcutaneous tissue being closed in the usual way.

If the uterus is found to be too large and bulky to be included in the abdominal incision, the body, or a portion of it, is amputated, and the remaining stump, after it has been closed, is used for fixation. In these cases a small rubber drainage-tube is placed at the lower end of the wound, which is removed at the first dressing.

After this operation the uterus can never again get back into the abdomen. The traction on the anterior vaginal wall holds the bladder in position, and the posterior vaginal wall will support the rectum.

WHY THE PROFESSIONAL ANESTHETIST?*

By R. M. Waters, M. D.,
SIOUX CITY, IOWA

I hear that some surgeon in this state is using a nurse or an office girl—I'm not sure which—to administer anesthetics to his patients. Do you know why? The only honorable reason he could give is because he believes that she can give an anesthetic better than any practitioner of medicine available in his community. Surgeons with this handicap can be found in many communities in the United States today.

To my knowledge there are three reasons why a surgeon should employ other than a medical graduate as an anesthetist: First, necessity or convenience; second, the cost; and, third, lack of proficient anesthetists among the physicians available.

I admit the convenience of employing a nurse as an anesthetist who is your individual helper and is at your beck and call every hour of the day or night. I admit the convenience, and sometimes the necessity, of allowing a nurse to administer an emergency anesthetic when no one else is available, just as I admit the necessity of the husband tying the umbilical cord in the absence of other human help at a precipitate labor; but that is no argument that we do not need to train doctors to be obstetricians. No more is the occasional necessity for a layman or a nurse to administer an anesthetic argument that we physicians should not fit ourselves to do the best work that can be done in that line and help to develop the science, to make it better.

Convenience is no excuse if better service can be secured for the patient in another way.

As to the dollars and cents argument I believe the public is glad to pay for the best service to be had for their sick. I make a living, and I do *nothing* but anesthesia, so I think it is true in the case in hand.

The third reason that a surgeon can advance for employing non-professional anesthetists is, as I said in the beginning, the only honorable one, namely, the lack of proficient anesthetists among the doctors available, and, I regret to admit, it is a valid one in the Midwest of the United States. Interest in the science of anesthesia has been lacking, but better times are in sight.

A decade or two ago this country woke up to the fact that the average doctor was no better obstetrician than the average midwife. What was the result? In larger towns men began to take up obstetrics as a specialty, and schools laid emphasis on obstetrical teaching for all physicians, and what a wonderful improvement we have seen!

Just so now is the country awaking, in the last few years, to the fact that the average doctor is a no better anesthetist than the average nurse, and what is to be the result? Shall we "lay down on the job," and say, "Oh, a woman is fitted by nature to give anesthetics; we will train the nurses." Did it seem wise to say that about obstetrics? And yet a woman is surely better fitted by sex to coax the budding human offspring into the light of day, if sex is an argument, then she is to guide a patient's way through the "valley of the shadow" of anesthesia. We have women physicians who are good obstetricians, and so do we have women physicians who are good anesthetists, but not because they are women simply. I do not want a midwife or a nurse to deliver my wife when my hoped-for son arrives; neither do I wish a nurse or an office girl to anesthetize her when her appendix is removed.

"Well," I hear some surgeon say, "my nurse can administer an anesthetic better than any of my fellow practitioners whom I find available, and I shall continue to use her." If you, in your town, are sure that this statement is true I can not blame you. My paper today is a plea for better times.

I wish especially to appeal to the physicians (both women and men) in every town who occasionally give anesthetics, to wake up, get busy, and make anesthesia a part or all of your business. Do it the best you know how every time you officiate at the head of the table. Learn all there is to find out about it, and help the rest of us to do it better by adding to the developments already made. Keep records of your cases,—good results and bad,—and report them accurately. Keep abreast of the literature on the subject. You will be surprised at the amount of reading along this line that you can find. Anesthesia is a science worth while. It is not a nurse's job which you must be ashamed to have to perform—to feel concerning it as you would at being caught giving a a soapsuds enema. It is a physician's job; an art, if you please, just as much

*Read at the 37th annual meeting of the South Dakota State Medical Association, at Mitchell, May 22 and 23, 1918.

as surgery is an art, and requires training, reading, and work to do it well.

A nurse's training is not sufficient foundation for becoming an anesthetist of value to both patient and surgeon. One must often use all the professional knowledge he possesses to judge the advisability of risking an anesthetic in a given case, and only the man who often gives anesthetics and watches the reaction of the patient to operation and anesthetic damage, can judge best what the prospective case will stand in time and rough procedure. Only one who makes it a study can best judge how the patient is standing a procedure once begun. Shall the appendix be removed or left alone after a long, hard hysterectomy? Sometimes it is removed without damage, and sometimes it is a grave misjudgment to take the extra time. Can the surgeon tell? He sees a white sheet before him with a six-inch abdominal wound in the center. The anesthetist knows the pulse and respiration rates, and the pulse-pressure tendency from the beginning, and has seen the effect of the previous procedure. He can best say whether ten minutes more operating means shock for the patient or not. Is a nurse's training sufficient to fit her for such observations and judgment? But am I not right? Are there not times when every surgeon feels the need of advice as to when to quit and when to keep on? If the properly trained individual is the anesthetist, is he not the one to give that advice?

I presume that an occasional case of shock developing either during or after operation is the experience of some of my hearers. I shall therefore digress to the extent of calling your attention in a hurried way to two studies of the subject with which you are doubtless familiar, but which will bear a second consideration, I am sure. I mention them here as examples of one phase of the science of anesthesia which makes it more interesting than the giving of a soapsuds enema.

At the San Francisco meeting of the A. M. A. some years ago McKesson, of Toledo, reported five thousand anesthesias during which he had made five-minute records of the systolic and diastolic blood-pressure readings. In summing up, he stated that he believed that he could, positively, foretell the oncome of shock from his blood-pressure readings fifteen to thirty minutes before the pulse-palpation gave warning. He was right. Lately "acidosis" has almost eclipsed "shock" in interest in regard to patients who "go bad." Captain W. B. Cannon, late of Boston, and his medical research committee of the R. A. M. C., have made the following interesting observations on wounded and exposed soldiers in France:

A man in whom are the clinical signs of "shock" as we commonly class them, has a lowered blood-pressure and a reduced alkalinity of the blood-plasma, the reduced pressure and reduced alkalinity or acidosis corresponding to a large extent in degree. Cannon's deductions as to the real relation of "acidosis" and shock,—or exemia, as he suggests calling it,—we have no time to consider here. Suffice it to say then that we have here some very interesting facts of practical value to the anesthetist and surgeon.

The time to treat shock, as we all know, is previous to its complete development. If, as would appear from these late reports from the front, blood-pressure readings can be used to foretell the onset of "acidosis," as well as shock, or the symptoms we know by that name, are not the blood-pressure readings worth while taking in every uncertain case in civil practice? Personally, I believe that if such readings were taken and interpreted in every bad-risk case, and sufficient team-work existed between anesthetist and surgeon, shock would be a very rare occurrence in civil surgery.

Will you pardon the digression? It was merely to suggest to you that there is more to anesthesia than the watching of the drops as they fall from a Squibb's ¼-lb. can onto a gauze mask. Anesthesia is a subject of intense interest. It is a very young science, and, I predict, it will advance very far in the next decade. Is it not worth while for one of you, in every group of physicians who work more or less in co-operation, to give it the special attention it demands? This does not mean, necessarily, an exclusive specialty. Every man must have a hobby. The art of administering anesthetics offers newness, interest, and good remuneration if it is done thoroughly and well. The time is near when the public will demand the best that is to be had in this line. The non-professional person cannot properly give an anesthetic. Do you not think it is "up to" more of us to adopt this orphan hobby?

In conclusion: if by chance any doctor present can influence a medical-school curriculum one iota toward better instruction in the administration of anesthetic drugs, both general and local, I pray that he may exert all that influence. By that means only can the doctor of medicine of the future be saved the necessity, which must be yours and mine, of digging it out for himself.

DISCUSSION

Dr. C. E. McCauley (Aberdeen): I was somewhat responsible for the presentation of the paper of Dr. Waters, and I feel like offering him an apology for the position in which he has been placed on the program (his paper coming after nearly everybody has gone home), because I believe it is a very vital subject.

The subject of anesthesia has been neglected in the medical schools; and up in this Northwestern country, particularly, we have gotten into pretty bad habits. I do not like to call names, but I think the Rochester Clinic has been responsible for this. They make the claim down there that a nurse makes a better anesthetist (I have heard Dr. W. J. Mayo say this) than the average doctor, because the average doctor is more interested in the operation, and is watching the operation and is not watching the anesthetic.

Possibly that is true from the standpoint of the general practitioner, or when one surgeon is giving the anesthetic and another surgeon is doing the operating, and the man who is giving the anesthetic is too much interested in the operation and is not watching his anesthetic. But that does not get away from the fact that we should have trained men to give anesthetics. It is a big science by itself. Dr. Farr has shown how hard it is to put anything new into this thing, and you will not be able to get anything new into anesthesia unless you get someone to study and work it out.

I know that in one town in this state there are several nurses giving anesthetics. Three or four of them were girls that were taken out of training schools and had never had any experience. I have had two cases where I was called on hurriedly, within six weeks, where one of those nurses was giving the anesthetic. Both cases were diagnosed as acidosis. Fortunately, both patients recovered. I do not say it was the fault of the nurse, but I know that she knows nothing about anesthesia, and simply pours the ether on until the patient is anesthetized or asphyxiated, whichever word you want to use.

It seems to me that this is a thing that we ought to take up as medical men and use our influence to secure better educated anesthetists. Anesthesia does not necessarily mean ether anesthesia, but all lines of anesthesia. It would be absurd to say that anybody without any training can put a patient clean out of business in five minutes and hold him there, without knowing something about the fundamentals of physiology, anatomy, and the action of drugs. This thing is getting so big up in this country that, as the essayist said, if you get a nurse to give an anesthetic, there is really no inducement for a doctor to make a specialty of it, but all over the country there are experienced men who like to do that sort of work, and who are doing good work along that line and making good money out of it. If we can get a few men to follow this work, it will prove an interesting field and a remunerative field, as well.

I think the main reason that we are having nurses give anesthetics, at least up in this country, is the question of money. In most of the towns you will find some men who are good anesthetists. We have one or two in our city who are good anesthetists; but we have a fixed fee for a great deal of our work. You will find that the average fee for small work, such as tonsils, is $25, $35, or $50. The average fee for major operations runs between $100 and $200. Suppose I do twenty-five operations a month. It would cost me $10 for the majors and $5 for the minors on an average where they are done under an anesthetic. I am going to pay out anywhere from one hundred to one hundred and fifty dollars a month for anesthesia, and if I can hire a girl who will keep my instruments clean, and who will do my office bookkeeping, work, etc., I can get her for about sixty-odd dollars a month, and I am making from one to two hundred dollars a month clear on that alone.

I really believe that is the reason. It is no reason at all, of course, for we should charge the cost of the anesthesia to the patient. I say, "My fee is so much," and then the other doctor's fee is ten dollars or twenty-five dollars, or whatever he charges. I try to pay him according to the fee that I get, in proportion, but never less than ten dollars. I do not know when I have paid less than ten dollars for the giving of an anesthetic. I find that patients do not object, even in circumcisions and in opening abscesses in children where it is only a minute's work. I had a baby a few weeks ago with an abscess in the neck. The parents did not object to paying the anesthetist ten dollars, although it took not over two or three minutes. They even appreciated it. The mother came to me afterward, and said that she was glad I had had this man give an anesthetic because she knew that he was a safe man.

I think it is a simple matter to educate people as to the seriousness of anesthesia, and just as soon as you do that, and the anesthetists find that they are going to get enough of that work to pay them, they will become interested in it.

Another thing against the use of nurses in this work, —and possibly it can be said against all of us,—is the fact that the average nurse has absolutely no previous record of the patient, and if she had it would do her no good. The anesthetist should examine the patient the night before, and take the blood-pressure on the evening before and in the morning. He should know exactly what condition the patient is in. How many patients do we have that ever have a urinanalysis before their operation? I am referring, of course, to small operations. How many have blood-pressure records taken, or anything of that kind? There should be a good anesthetist in every town the size of Mitchell, where we are holding this meeting, who could give properly any anesthetic, and check up on patients twenty-four hours, or as many days, before the operation as necessary, and get them in good shape.

I had a patient come into my office not long ago with a systolic pressure of 80, and a diastolic of 50, and it had been planned to have a serious operation the next day, with a nurse to give the anesthetic. No examination had been made; and the man had a frankly surgical condition, of which anybody could make a snap diagnosis; and they were going to operate. And what would have been the result if he had gone through a serious two-hour operation? I put him in the hospital for a few days, got the blood-pressure back to 100 systolic and 65 diastolic. This patient went through a rather stormy convalescence, but he got well.

It seems to me that we ought to bring this thing home to all the men who are doing surgery, and all of us are doing surgery to a certain extent. Of course, there are cases in country towns where the operator has to employ the husband or the wife or the hired man, or an office girl, to give the anesthetic, but that is not true

of the men in the towns where there are two or three doctors at least.

Dr. D. W. Craig (Sioux Falls): This is a very important subject, and the paper we have just listened to is not going to revolutionize the question of the administration of anesthetics at once. It may work in gradually and change the methods later, to a large extent; but it is going to take time. The doctors in the different cities are going to continue to use ether. Possibly some other anesthetic will be invented or discovered which may supersede both of them.

But I am very much interested in the administration of ether. I have studied it a great deal, and a few years after I graduated at Northwestern I became a demonstrator in the use of ether at the Northwestern Dental School, and became very well acquainted with the use of it. I believe I can give a fairly good ether anesthesia; however, I am willing to at any time give it up when we find anything better.

But the point the doctor makes, that it should be given by a specialist, some man who is well acquainted with and knows how to handle it, is a very good one. I think the time will come, if we continue to use it extensively, when possibly we shall discover some method of giving it, besides the present method, the open method, and I think that warming it and giving the vapor from a cylinder, mixed with nitrous oxid and oxygen at pleasure,—I believe that is another field which will be developed much more than it is at present, and probably will come into wider use than now. But it is expensive, and requires some one who thoroughly understands the giving of it to administer it effectively and safely.

I am very much interested in the subject, and I am sure that the best method will prevail, and that is what we want.

Dr. Mortimer Herzberg (Vermilion): There is a matter with reference to local anesthesia which has been brought out very nicely this afternoon. In my limited experience, there is one thing which has astonished me in seeing work in some of the clinics, and that is the crudeness and lack of consideration with which the patient is treated previous to the operation. My previous experience has been in the East. I have never seen, until I came here, them take a patient in almost any surgical condition, walk him into the clinic, pile him on a table in front of the nurses and every one else, and before he was under the anesthetic start to strap him down on the table. I think that is just abattoir work.

In the East the poorest and most humble patient, who pays nothing, who may stay in the hospital for a month, at the public charge, is taken into a private room where things are quiet. He is put in bed a day or so before the operation, if possible. He is carried out on a cot by the orderlies and the nurse. The patients are taken into a private room, and under pleasant circumstances are given their anesthetic, and then carried into the operating-room. How you are going to overcome the shock of taking a patient into the operating-room, as above described, is more than I can say. I think it is very crude, and I should like to see that changed in the Northwest.

Dr. R. E. Farr (Minneapolis): I would like to say that if we had enough men like Dr. Waters, or had had such men twelve or fifteen years ago, in the country where I work, I probably never would have been doing very much local anesthesia work. My experience was just like the experience of everyone else. Years ago I started out with the internes giving the anesthetic. In those days I was young and husky, and I threw one interne clear across the room once, and he hit the door of the operating-room, and I do not think he came back. I caught him three times during the operation turning his back on the operation and talking to a nurse. The first time I did not speak to him, but the third time I started into him. If we had had that sort of thing such as Dr. Waters described in those days, we would not have gone into local anesthesia.

There is no question in my mind but that general anesthesia can be made very safe. The only trouble is, we are up against actual conditions as they exist, and you take it in the Northwest here, how are you going to get the doctors in Minneapolis to give anesthetics for you? At St. Mary's I tried to hire a physician to give my anesthetics, but they would not allow me to take the physician into that hospital or I would have to leave the hospital. I was not strong enough to put it over. They wanted their internes to have the experience. The internes were no good; they were not under my control or under the control of the superintendent of the hospital; they were under nobody's control. They knew more than any of us. And I myself knew twenty times as much as I do now, when I was an interne.

I went to another hospital, and I tried to do the same thing. I said I must have my own anesthetist. They said no, we have these nurses, and they must be trained, and they are going to give the anesthetic. Finally, after I had a long, long fight, they finally put in a couple of physicians. They happened in this case to be women who had made a failure of practice. Unfortunately, the professional anesthetist who is a physician in this country is largely that type of individual. He is a man who cannot get business any other way, and he goes into anesthesia. He is willing to take the business of giving anesthetics because he can make a bare living at it.

The reason we have not better men or a larger number of good men giving general anesthetics, is that we do not see that they are properly paid. If I were going to do an operation under general anesthesia, and knew that it was to be or had to be general anesthesia, or was going to have it done on myself, I do not think twenty-five dollars is any too large a fee for such an individual, or fifty dollars or even one hundred dollars. In many instances the anesthesia is more important than the operation itself.

But we are up against this proposition. This war is going to have this influence. We are not going to have physicians enough to give anesthetics, and the nurses are being worked in to give anesthetics. And when the war is over they are coming back here, and they are going to continue to do it; and we are up against that sort of thing.

We are going to lack physicians for the next ten or fifteen years, if the war goes on here yet, and what are we going to do about it? My notion is that if we have men like Dr. Waters, enough of them, then the problem is pretty well solved.

It is desirable to know in what way the patient had been handled while you are away. Crile tells of his experience, what he knows now compared with what he knew before the war began; and you will get a different viewpoint, those of you who have heard him.

He has stayed in the hospital for twenty-four hours at a time where he used to stay down simply in the forenoon only. He found out what went on in the afternoon and evening and in the middle of the night, and I believe that every surgeon would do well to do what I have done, to go back and live and stay at the hospital afternoons and evenings for a while and make a psychological study of this thing.

I went back and I staid there, and I had not started to do it, but I staid there to see what happened to those patients. You get a viewpoint such as the nurse gets, if she is interested, and you find out what the condition of the patient is in the afternoon and in the evening and at night. I will bet you, if you take 100 cases and let some unskilled anesthetist take care of them, and then let Dr. Waters take 100 cases of the same type, the same men operating, you will find an entirely different proposition.

The proposition of handling the tissues—the anesthetic will govern the way the tissues have to be handled, even with the same men doing the work. The individual who is not properly relaxed will have to be fought. The tissues will have to be fought. I have seen it over and over again, in just packing the abdomen, and pushing back those intestines that are trying to force their way out, which never occurs in any proper anesthesia. I mean, as a rule. That patient can be sent almost to death, just in packing the abdomen to get ready to take out a pair of pus tubes. I have seen it over and over again.

I would like to see professional anesthetists with "M. D." after their names, but it is going to be a proposition to educate the laity.

My people will pay out the money for these anesthetists if I impress them with the fact that it is necessary. You have got to handle the hospital people, and this nurse proposition, and you have the biggest clinic in the United States, and those that exert the most influence against this other thing.

I saw it at a large clinic in the West here within the last month,—and I saw at least half a dozen blue patients each day when I was there, blue all the way through the anesthesia and straining and fighting, and the surgeons fighting the abdominal viscera, and the nurse giving the anesthetic sitting there smiling and talking with other nurses at the side, and looking towards the visitors; I don't know what their idea was, but they were not looking at the patient.

I don't know how we are going to overcome this, but I believe that such cases as Dr. Waters has brought out here today,—and it is too bad that more of the society did not hear it,—will be a good thing.

Dr. Frank I. Putnam (Sioux Falls): This is a day of specialists.

When a patient comes to me for an operation I say, "Who do you want to put you to sleep?" "Whoever you say," they almost always say. "Well," I say, "it is always my custom to have your family doctor." You can say that when you have been in the place long enough to have seen all the men who are doing general practice and giving anesthetics. I have seen them give anesthetics. They are all good, but some are better than others. Personally, I have given one anesthetic, and that was about a week ago, on a little child about three weeks old with a case of strangulated hernia. That was an emergency case, and I gave the anesthetic. I believe that if a man would locate in Sioux Falls as a specialist for the giving of anesthetics, he would make a good living. When a patient asks the question, "Who do you want to have put me to sleep?" you can say that there is a specialist in that particular line there, and they go for him.

Dr. Waters (closing): In regard to the possible objections on account of the fee for the giving of an anesthetic: It occurs to me to tell you an experience which I had along that line. When I started out I used to depend on the surgeon for the collection of the fee, as it seemed to have been the custom in that town to have it done that way. I found it very unsatisfactory because sometimes I did not get my fee. For the last several years my custom has been to collect my own fee directly from the patient, usually at the time of operation. My business is almost all cash. The people do not object. They know to whom they are paying the fee, and when they come to pay the surgeon's bill they have forgotten about this, and it does not look as if it was tacked onto his bill, and it seems to get by, and they digest the idea of paying the anesthetist a little better.

In regard to the pre-operative examination, etc., which was spoken of. Of course, I realize that is part of the anesthetist's business, and although I did not mention it, I endeavor always to do it. I take care of my own hypodermics, too, and I consider it a part of my business to make this pre-operative examination of the patient before the anesthetic is given. I find that oftentimes a surgeon is too busy or forgets to think about that. The anesthetist often does not see the surgeon until he gets to the operating-room. If the surgeon tells them what to expect and how to go about it, they would do better. They are better satisfied in every way. I do not have any difficulty at all about the fee with the people. The biggest kick I have is sometimes from the surgeon, because there are surgeons who are a little suspicious of me if I get twenty-five dollars or fifty dollars for giving an anesthetic, and they think that is more than I ought to have, if they get three or four hundred dollars for the operation.

I believe it is worth that amount if the work is fairly well done. It is not the people who do the kicking. I have many cases come to me on account of the insistence of the patients, and in spite of the surgeon, sometimes. But I think the surgeons mostly appreciate good anesthesias, and are glad to have them, and I think it is well worth any man's time to take this work up, and at least to pay attention to it.

The subject of ether anesthesia has come up quite extensively. I would like to say an additional word in regard to that. I do not believe that ether is our perfect anesthetic at all. I believe, as an adjuvant in combination with nitrous oxide and oxygen, ether is very useful in some cases, but I believe that we have in nitrous oxide and oxygen, with possibly sometimes the addition of ether, a very close approach to the ideal in general anesthetics, which Dr. Farr has shown in his pictures this afternoon on local anesthesia. I will admit that Dr. Farr's technic is hard to carry out successfully, as he carries it out. It is a thing which one must spend some three years on in order to perfect the technic in local anesthesia. I believe it is necessary also for a man to spend as much time and attention in the technic of nitrous oxide and oxygen anesthesia. It is necessary for him to be doing it every day. If he goes away for six months and comes back he finds that he is rusty, and

it takes him some time to get back on the job. The technic is of such a fine nature that you have to keep at it every day and study it right along in order to keep up.

There is a development the world over in the administration of anesthetics and in nitrous oxide and oxygen, particularly because that is receiving more attention from men who have gone into the subject in detail, because it seems to be the nearest to the ideal. There are being developments made every day and every month that are well worth while to keep the men reading and to confine their reading almost exclusively to that which relates to anesthesia and anesthetics. Almost everything has some relation to it, as far as that goes, but I find a great plenty of literature to occupy all the spare time I can get.

It is an interesting subject that is well worth any man's time in taking it up, at least as a hobby, along with his general practice, if he is not exclusively specializing. And in any town of reasonable size, such as Sioux Falls, I feel very sure it would be without question but a very short time until a man would make an abundant success of it in a material way, in confining himself absolutely to anesthesia.

The surgeon comes to appreciate and depend upon you, for it takes a lot of worry off of his mind. I have in mind a man who used to have lots of worry. He was conscientious, and he worried lots about the anesthetic, but he has come to depend upon me exclusively now for that part of it. He happens to be a specialist of the head variety, and he is not up on chest-work, and I make it a habit to go over his cases very carefully.

Within the last week he called me to the hospital on a certain occasion to give an anesthetic at a certain time. I believe the time was eleven o'clock. I got there about an hour and a half before he did. I was in for another case; and the patient was just arriving. This young man had had an acute cold with tonsillitis and had recovered. He was in the office of the doctor, and thought he was sufficiently over his cold—he seemed to be all right. The surgeon thought he would operate on him because the tonsils were evidently seriously damaged and apt to cause another attack of the kind which he had had.

In going over him I found that he had quite a quantity of albumin in his urine, at least noticeable, and the blood-pressure apparatus showed his blood-pressure very shallow. I suggested that the doctor wait a week; and he asked if this young man could appear in his office in a week. The week would be up Saturday, and I heard that this patient was sick in bed with a temperature of 103.° Had I given him the anesthetic and had his tonsils been taken out on the occasion suggested we would doubtless have been blamed for the fact that he was laid up now, and things would have been in rather an embarrassing situation.

It is the little things which surgeons do not take time to do themselves that are the things that help surgeons, which are appreciated by them. It is just an illustration of what use you can be, and to show you that it is worth while to take the thing up.

I think in every community, even in those which are very small, a man can still do general practice and pay special attention to anesthesia to such an extent that it will be worth while.

I thank you for your very kind reception of a subject which I had not expected would be of especial interest to you.

PRESIDENTS' PROBLEMS IN LOCAL MEDICAL SOCIETIES*

By E. M. Ransom, M. D.
MINOT, NORTH DAKOTA.

Presidents of county or district societies in different localities may find their problems differing according to the responsibilities which they feel to be theirs in the office which they hold; but, I believe, a president's problems and a secretary's problems should be largely the same, in other words, these two officers should work together in everything which has for its object the building up of the society. It is the duty of the president, perhaps more than of the secretary, to get up an interesting program, to stimulate interest in the meetings, and to keep the attendance up. Our own secretary feels that he has his hands full with correspondence, getting out notices of meetings, collecting dues, getting new members, arranging for feeds, etc., and that the matter of program and prodding the members to attend is the duty of the president. He feels, quite justly, I believe, that everything in connection with running a medical society should not be placed upon the over-burdened shoulders of a secretary.

If we leave out of this discussion one of the greatest problems of the president and secretary of a local society, that of inducing members to take part in the program, a subject which Dr. Drew will no doubt touch upon, we shall still have left an even greater problem—that of keeping up the interest in and the attendance at the meetings of our district societies, for of what use is an interesting program when there is only a handful of men to enjoy it? It seems as if physicians everywhere would realize the great personal advantage to them of attendance at their medical society meetings, that they would be anxious to attend and take part in every meeting possible, that they would bury for the time being any personal grudge they may have against the officers

*Read before the Section of Presidents and Secretaries at the annual meeting of the North Dakota State Medical Association, held at Fargo, June 19 and 20, 1918.

or other members of the society, forget any difference of opinion which they may hold as to the conduct of meetings, and, putting their shoulders to the wheel, would help to make their society bigger and better all the time, if for no other reason than that of the tremendous good which that society can do them. Yet such is not the case; and, not only in this state, but in every state and ever since medical societies began, the same old problems have had to be solved.

Realizing the neglected status of local societies, the American Medical Association, in 1915, asked through its bulletin that secretaries should discuss the subject under the title, "How Can Members Be Induced to Attend Meetings?" A ready response was received from secretaries all over the country. These replies showed that the same conditions are widespread, that secretaries and presidents everywhere are forever struggling to keep alive societies which seem to prefer to die rather than to live.

Many of these discussions are interesting; from many of them perhaps we may get some suggestions which will be of benefit to us in this state, for which reason I will detail some of them. We must, of course, bear in mind that some of these suggestions apply to surrounding conditions so different from our own as to be of little value to us. For instance, suggestions from societies meeting in large cities or near enough to large medical centers to make possible means for creating interest in society meetings which we do not possess, can scarcely help us solve our problems.

Dr. Harry A. Reese, of the Cochise County Society (Arizona), states that there should be a program worth while, which from his point of view is one which instructs, entertains, excites a desire to know more about the subject under discussion, and stimulates to better work and to original investigation. He believes that there should be a lunch, as a man with a full stomach is better than one with an "aching void," and he makes much of good fellowship, a cheery word, an expression of appreciation, professional courtesy, etc. He makes a statement which most of us know to be too true, namely, that some good men absent themselves from the meetings because they do not want to have anything to do with the other fellow. He concludes with these remarks: "Quarrels and bickerings, cliques and clans, will largely destroy the efficiency of any medical meeting. For the sake of our own peace and the welfare of our fellowmen let us resolve to forgive the past, to forget the faults of others, and remember our own, to quit lying about our neighbors, to secrete more of the milk of human kindness and less gall."

The Maricopa County (Arizona) Medical Society meets every week. Dr. W. Warner Watkins, secretary, considers the most important feature for stimulating attendance to be a good meeting-place. They have one furnished by the society with comfortable arm chairs, officers' desk, well lighted, balopticon-projection apparatus for lantern-slides, prints, microscopical and shadow projection, and a skeleton. He states that they have no library, but use a plan whereby a list of journals received by all members is furnished each member so that any member can borrow from another. "Finally," he says, "the very spirit which permits of such interchange of magazines is the proper spirit on which to build a medical society."

A great variety of opinion is expressed in these discussions as to how often a society should meet. Some say every week; some say every month; and some say once or twice a year. Some say papers on subjects other than medical are not successful in creating interest and stimulating attendance, while others say such papers add interest and break up the monotony.

Dr. H. C. Blankmeyer, of the Sangamon County (Ill.) Society, advances some good ideas. He says the average member believes that if the society secures one "live secretary," that will solve the problem, but it does not. He believes the secretary should be a young man, that he should hold office for three years,—a year to learn the best way to do things, a year to do them in, and a year to perfect the office for his successor. After that, get rid of him, as he then begins to consider himself a necessary evil in the society, and will, sooner or later, become a nuisance rather than a benefit. He believes in a well-balanced menu preceding the meeting, and in getting some big man from a medical center to address a number of meetings during the year. He suggests that secretaries can get some amusement and do some real good by deftly seating members who cordially dislike each other side by side at the feeds, during the course of which each of "these children" will discover a side to his enemy he has never seen displayed, and that he really has some good personal traits that are worth considering along with the faults common to mankind.

Dr. H. D. Fair, of the Delaware County (Indiana) Society, says: "Every society is composed of three classes: the workers, the loafers, and

the knockers. The third class do not attend because they do not like the first class, neither will they consent to be on the program because of the second class." They solved the problem in their society by starting a quiz club, which gradually stimulated interest and rejuvenated a society which had been in a rut for twenty years.

Dr. E. M. Shanklin, of the Lake County (Indiana) Society, believes that many members whose interest has never been aroused will become live assets if they can once be induced to take part in a meeting. He says that in every society of any considerable size there will be found a few non-attending members, who hold the opinion that the organization is controlled by and operated expressly for a few individuals. Once you can get these men to working they will soon see that they have been wrong.

Dr. Emil King, secretary of the Southern Minnesota Medical Society, feels that a good discussion of papers read is more important than the papers themselves to stimulate interest among the members. He concludes his meetings with a feast, finding that breaking bread and swapping experiences with one's neighbor tends to bring out a more brotherly feeling and leads to greater tolerance and the overlooking of the more or less frequent troubles between physicians.

Dr. W. E. Griffith, secretary of the Butler County (Ohio) Medical Society, banks on the secretary, of whom he says: "He must be a good all-around man who commands the respect and confidence and support of all members. He must be a hustler not afraid of work or the midnight oil."

Dr. A. S. McCormick, of the Summit County (Ohio) Society, says, among other good things: "Officers must be chosen carefully for their ability. Permit no personal jealousy or prejudice to influence the selection. To interest and manage efficiently a medical society requires harmony, fearlessness, dignity, courtesy, no prejudice, and hard work."

Dr. W. K. Statler, President of the Cape Girardeau County (Missouri) Society, believes we should have more demonstrations of pathological specimens, and interesting cases; and he scores a real point with the following: "When a physician thinks he can learn nothing at a medical society he has reached a period of self-satisfaction that is opposed to his own, as well as to his patients', interests. If he says he had rather stay at home or at his office than attend some medical 'gab-fest' where some young, inexperienced enthusiast reads a paper on the diagnosis of pernicious anemia or some old fogy reads one on Colles' fracture when he can read a much better discussion in his Osler, Cabot, or new Keen, he is like a man who stays away from church services on Sunday because he has a family Bible at home on the mantel in a fine state of preservation."

From a review of these discussions we can see that keeping up interest in a county or district society is not a local problem; and we can see, too, how many different plans are tried in an effort to solve it.

We, ourselves, have tried many of them with such indifferent success that we get discouraged, and feel inclined oftentimes to give up in disgust. Thus we find ourselves trying to decide such questions as these: How often shall we meet? Shall we have feeds at every meeting, and, if so, should they be banquets or "Hoover" lunches? Will outside papers by big men bring out a crowd, or will the big man talk to empty seats? If a paper by a big man will be a drawing card, how can we obtain the services of a big man way out here so far from a real medical center? Again, will papers on subjects not strictly medical or surgical help to add pep occasionally, will it stimulate interest to have an attorney, for instance, discourse on "The Law and the Doctor"? Will a combined meeting of doctors and dentists or of doctors and pharmacists help to increase interest? Right at this time we have many new subjects in which we should be interested outside our regular line of study, such, for instance, as workman's compensation, premarital examinations, public welfare, child welfare, child labor laws, etc. Will their discussion add interest to a society meeting, and, if so, whom shall we get to present the subject and how shall we get him?

In a recent letter from Dr. Craig, secretary of the American Medical Association, he suggests that interest should be aroused at this time by having the component societies discuss questions relating to medical problems arising in the execution of the selective service regulations, problems of local boards, advisory boards, and how the members of the profession can contribute to the effectiveness of the work of these boards. He suggests the subject of malingering in this connection as a useful and live topic for discussion. But will these subjects in themselves serve to create interest among the members as a whole to such an extent that we shall see any marked new life in our societies?

I believe many feel that the society should meet in the largest town in the district, providing it is conveniently located; but we are confronted with this question: Will changing the meeting-place occasionally to some other town serve to add interest to a meeting or will it not? Is there any tendency on the part of the men in smaller places to feel that the men in the larger town are trying to use the society to further their own interests and to the exclusion of these men in the smaller places? I believe often such a feeling exists, and I believe this feeling is increased by the fact that failing to get responses from men throughout the district to invitations to present papers at our meetings we are so often forced, in order to hold a meeting at all, to fall back on the men in the larger town in which the meeting is held. This, of course, places these men in the lime-light much oftener than should be, but why do the men who complain about this force the condition upon us?

During the past year in our own society, I venture to say that 75 per cent of the outside men have failed us completely, even failing to put in an appearance when on the program and sending us no word of explanation so that we might know what to expect and be enabled to plan accordingly. Surely, it is no more than right that a member who is on the program should at least notify the secretary of his inability to attend. How much better it would be for those who do attend to be able to hear that Doctor So-and-so cannot be present because of illness, or some other good reason, than to sit expecting his arrival and be disappointed at his unexplained absence!

We all feel, I believe, that we should have a good live secretary, one who works with a vim for the benefit of the society; and yet even this has been productive of evil inasmuch as oftentimes such a secretary is accused by certain of the members of using the society to advertise himself, and bring into prominence men who are valuable to him in the society to the exclusion of others. This condition exists in many societies. It has existed in our Northwestern District Society. A similar condition exists in our society at the present time in which a few men are refusing to attend because they are "sick" of hearing certain other men monopolize every meeting for personal aggrandizement. I have even known an instance where a secretary was "jobbed" out of office because certain members felt that he was exploiting the society to his own ends. Is this the proper spirit for any member of a medical society to be imbued with? Surely, all such feelings are absolutely unworthy and petty in the extreme, and should find no place in the hearts of any of us who are old enough to call ourselves men.

The officers of a medical society work conscientiously and unceasingly without pay to stimulate and increase interest in their society. Should not we as members try to repay the work done by these men by added interest and attendance? What will become of the local society if these men lie down? What would become of the medical profession if there were no county societies? Men who will not attend meetings of the county society still wish to be members of the State and the American Medical Associations, not only for the benefits to be derived from such memberships, but because of the fact that their standing in the profession is apt to be questioned unless they do belong to these societies.

And yet membership in these societies is impossible unless one belongs to a county or district society, and why should men who will not support the local society, who will not lend their help and personal interest and attendance to a society maintained for their benefit, be allowed to join either a State or the American Medical Association? Why should there not be a provision in the latter societies that an applicant should be able to show, not only membership, but active attendance and interest in his local society?

I believe that any scheme which will be successful in increasing interest in and attendance upon county societies must have something more to it than hard work and planning of interesting meetings by the presidents and secretaries, must have something of compulsion, must in some way make active personal interest on the part of a member a requisite to membership. Any society which is what it should be would make non-attendants feel a personal sense of loss for every meeting missed. How can such a condition be realized unless at least 90 per cent of the members be live ones so far as the society is concerned? How can they be made live ones?

My own belief is that in addition to a good president and a live-wire secretary there should be a program committee of at least three members, that these five should be assisted by animated suggestions from members, that meetings should be held in attractive quarters often enough to keep up active interest between meetings, that a luncheon of some kind should always be a feature, cigars a necessity, a sufficient number of

good papers, good clinical cases, stereopticon demonstrations, etc., arranged for these meetings so that those who attend will be assured of an interesting and instructive, as well as a social, time; and, in addition to all this, membership in a local society should carry with it a pledge on the part of the applicant and member that he will respond when called upon to take his part in the meetings, and a promise to attend at least one or two meetings a year and as many more as possible. Failure to keep this pledge should result in forfeiture of membership in the local society, which would make it impossible for such a member to be a member of either the State or the American Medical Association.

The local society means a great deal to every man practicing medicine in its jurisdiction. He should acknowledge its worth, and repay its value to him by a personal, active interest in and service to that society.

THE USE OF THE CONJUNCTIVAL FLAP IN EYE-INJURIES*

By Frank Israel Putnam, M. D., F. A. C. S.
SIOUX FALLS, SOUTH DAKOTA

Our country is at war. To save time in this symposium so that more time may be given up to war topics, I have eliminated twenty-five case-reports of eye-injuries where we have used the conjunctival flap in the past three years. My cases deal with those we meet in civil life. I hope at some future date to report others in a military field. To describe briefly the different conjunctival-flap operations we use—they are as follows:

1. The single pedunculated flap.
2. The double pedunculated flap.
3. Two flaps, one with a single peduncle, the other with two bases.
4. The complete flap.

The single pedunculated flap is made by dissecting the sclerocorneal-conjunctival limbus about one-third around. Then the apex of the flap is cut broadly about 1 cm. wide, and a cut made parallel upward, forming a flap, which is then laid carefully over the corneal defect, with or without suture, and a pressure-bandage is put over both eyes, remaining on two to four days. The pain disappears in two to five hours. If the first dressing is made in twenty-four hours, the flap looks like a diphtheritic membrane, on the fifth day becoming intensely red, and in eight to ten days atrophying so that it appears as a diaphanous, thin membrane over the cornea, which speedily disappears, leaving the surface healed.

With a double peduncle the limbus incision is curved about two-thirds of the way around the cornea, and the flap brought straight over the corneal defect, the flap being, as a rule, attached to the limbus. In every case the raw surface left from the conjunctivoplasty is permitted to heal spontaneously, which occurs by encroachment of the conjunctiva upon the surface, which covers the surface in about three days.

Two flaps may be used for central defects, one with a single peduncle and the other with two bases, forming a cross over the cornea. These are secured by stitches, which are cut in five to seven days, when the flaps retract to their former places and heal thereon; or they may be held together in the center by a stitch, the under flap serving for a keratoplasty and the other for a flap.

In extensive penetrating corneal wounds the procedure is more difficult, the character of the conjunctival flaps varying from single and double pedunculated or double flaps, as above described, to the dissection of a large part or all of the conjunctiva at the limbus and connection of its cut edges by three or four interrupted stitches or a pouch-suture pulled tightly to completely cover the cornea.

This use of the ocular conjunctiva is for protection rather than for keratoplasty. About five days after the cornea wound has sufficiently coapted, the sutures may be cut and the conjunctiva allowed to retract to place at the limbus, where it heals, and in a couple of weeks no trace show of its ever having been divided.

In complicated wounds of the anterior segment the prolapsed iris should be abscised, and, if the lens capsule be injured and the body of the lens be broken up, the lens substance should be released, and a careful toilet of the wound made.

In complicated wounds of the sclera the protruding uvea and vitreous must be cut off, and the wound cleared of debris before the sclera is sutured.

*Read at the 37th annual meeting of the South Dakota State Medical Association, at Mitchell, May 22 and 23, 1918.

In our practice we use the conjunctival flap in every case from complete incision across the cornea and into the sclera on both sides to the smallest particle of steel which penetrates the cornea, entering the globe either through cornea or sclera. After extraction of steel with the giant eye-magnet, we do the class of conjunctival flap that is indicated.

The point I wish to emphasize is this: The treatment of a wounded eye should be conservative from the first, in order to retain as much vision as possible, to preserve the cosmetics of the organ, and, in some cases, even to save life, as well as to relieve the agony caused by the injury.

With this maxim in view we must consider those methods which will give, first, the best results as regards vision, and, secondly, as regards the appearance of the globe and its surroundings, bearing in mind always the dread possibilities of sympathetic disease in the other eye, and remembering the operation of enucleation or its substitutes with which to combat this possibility. A most trivial injury may, through neglect, ignorance, or mismanagement, result in total loss of vision in one or both eyes, disfigurement, or even death; in all cases there will be damage to the earning ability, and pain and suffering all out of proportion to the same character of injury inflicted upon other structures of the body.

DISCUSSION

Dr. J. D. Lewis (Minneapolis, Minn.): Conjunctivoplasty, which Dr. Putnam has discussed, is one of the most effective means of saving the value of an eye that we have at our command. Formerly, many of the severe injuries to the cornea and to the sclera resulted in the loss of an eye from infection or from the constant escape of the aqueous or the vitreous fluid. Now we are able to combat those conditions by drawing the conjunctiva over, and protecting the wounded part of the cornea and the sclera.

Dr. Francis, of Buffalo, has devised a flap for a cut of the sclera, which is very effective in closing the scleral wound. He draws up a flap from each side of the wound, overlaps the two flaps and stitches them together; and he gets thereby a double covering of the weakened portion of the injured tissues.

In one case that I recall the results of this method of treatment of wounds were unusually satisfactory. The patient received a penetrating wound of the cornea just below the pupillary area, and the iris, from the sudden escape of the aqueous contents, was prolapsed into the wound. In this case I made a very large conjunctival flap, and before I stitched it down I sprinkled a bit of atropin crystals underneath the flap, to get the full effect of the drug. I waited a few minutes, and then inserted a small blunt hook underneath the flap. The aqueous having re-formed by this time, as a result of the valve-like effect of the flap, I was able, underneath the conjunctiva, to tease the iris back into the anterior chamber where it floated away under the mechanical effect of the atropin and the closure of the anterior chamber, and the only trace of the injury that you can see in that eye now is a small corneal wound, the iris being perfectly round, which, fortunately, is just outside of the pupillary area. Those of you who have not seen this work in the eye cannot appreciate its great value.

Dr. Putnam (closing): The main point I wanted to bring out was this. I had a long paper prepared, but I just cut it down to the short one I have read. My main point is that we have had several cases brought in within the last year and a half by men who wanted us to remove the eye, and I told them that we could try this conjunctival flap, and if anything set up in the way of sympathetic ophthalmia, we could later remove the eye, and I have been surprised at the number of eyeballs we have saved, and all good looking eyeballs with lines only across the cornea.

In one case, particularly, out here, that of a child, in which the doctor who sent it in said he thought the eye should be removed, we told the parents then that there would be no vision, but that it would be better to have the eyeball than to have an artificial eye; and the child came back later and had vision of about $^{22}/_{100}$. The point is this: If we try this conjunctival flap, if we get that made, we shall save a good many eyeballs, and a good many eyeballs with vision, by means of the conjunctival flap,—eyes that we should otherwise lose.

Question: Would not a fountain syringe apparatus work better than a bulb?

Answer: There is no objection to a fountain syringe. I think the bulb is rather better, because it is simpler, but a fountain syringe is entirely as practicable.

Question: Do you get a more even pressure?

Answer: The point is, you give something to the patient which is simple and easy to use. That is my idea; so that the patient cannot refuse to use it.

Dr. J. D. Lewis (Minneapolis, Minn.): I did not have the pleasure of hearing Dr. Grosvenor's paper, but, judging from the discussion which it has excited, it is evidently a very interesting and informing essay.

I would like to speak just a few words about the manner of combating the sequelæ which attend acute otitis media. First, our best weapon against brain and sinus involvement and extension to the mastoid is prompt and free drainage from the tympanum, not a mere puncture, for you would not do that in any other part of the body if you were seeking to drain a cavity, but a free myringotomy, and not a puncture. That is good surgery.

Secondly, any ear that continues to discharge profusely and persistently for a period exceeding two weeks means that you have at least an antral involvement, and the mastoid should be opened because that is the method by which you prevent the case from running into the chronic stage.

Fever, as an indication for mastoidectomy, is absolutely no guide, because you will find many cases of extensive destruction of the mastoid cells with the temperature running normally.

With reference to drops into the ear: I do not believe that they have any effect at all, because they simply form an admixture with the pus that is coming out.

THE
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JANUARY 15, 1919

THE MEDICAL FORCE IN FRANCE

The medical department in the army of France has permitted certain revelations to be made in regard to the medical officers, or the medical units, and hospital operations abroad. About the first of December statistics were given out, showing that 12,989 physicians were abroad in France in the medical service, that 8,593 nurses were also ready at the call of the fighter, and that in France alone there were 283,240 beds available for the wounded and sick. These beds, mainly, were in the camps and the base hospitals, and the convalescent camps, as well. Fortunately, about 100,000 of these beds were vacant. When America entered the war there were 300 physicians and 206 nurses, and within a year, or at least eighteen months, the larger number were available and at work.

Most of the hospitals in the army were of the mobile type. To each division there are 4 field hospitals, 2 evacuation hospitals, and 1 mobile surgical hospital, and, in addition, there are fixed hospitals consisting of camp and base outfits and convalescent camps. There are now 85 camp hospitals serving training and billeting areas, while, for the general service, and for the treatment of more serious cases and battle casualties, there are 115 base hospitals. These base hospitals vary in capacity from 3,000 to 15,000 beds. This may mean that several base hospitals, with their various units, are centered around one area, facilitating in this way the work of the men in all departments, helping the classification of the wounded and sick, and minimizing the number of officers in command. Many of these buildings are demountable; other buildings, such as barracks, school buildings, hotels, and partially constructed cantonments, have been taken over, remodelled and outfitted, lighted, heated, and modernized. The demountable hospitals, really huts in construction, are in some instances model, up-to-date institutions.

We shall have with the return of the medical force many men trained in hospitalization work, which will be of great benefit to the cities, as well as to the smaller towns, that is, their knowledge of hospital management and equipment and conduct will be of wonderful assistance.

The losses among medical men have not yet been announced, first, because they were widely scattered, and, secondly, because many of them were killed in the performance of their duties, and many have died from incidental diseases; but they have all contributed in marvelous ways to the perfection of the hospital care and treatment of the wounded and sick soldier.

THE READJUSTMENT OF THE RETURNING MEDICAL MAN

When the time comes for the return of the medical man who is in service overseas, and of those who have served in the cantonments in this country, there are quite likely to be individual difficulties, not only for the returned man, but for the man who has stayed at home. It should be understood, and probably is, that the man who has assumed the burdens of the care of the civilian at home, who has carried on, not only his own business, but that of his associates, is entitled to as much credit as the man who has volunteered for service, with the exception of the medical men who gave up their business, who devoted their time and talents to army medical problems, and who attained honor and rank as a partial compensation. Out of the many who come back to their homes, there will be a few who will feel rather superior, and it may be quite difficult for them and the men at home to readjust themselves to what was before a normal environment.

The men who have acquired fame and title, referring to the few, will be loath to drop their title or rank, and re-enter the list of the general or special practitioners. In many of the large business houses, banking establishments, and newspaper offices already there has been a determination to cut out, or to efface, all titles and ranks, mainly on account of the confusion and

the possible feeling which may arise if the return soldier demands a position to which he is not fully entitled. It is fitting and proper that these men, whether laymen or medical men, should be welcomed most cordially, and should receive the initial honors that are due them, but after the first reception is over a return to normal conditions should be at once in evidence.

There are a good many physicians and surgeons who have remained at home on duty, who have sacrificed much, and who have done extraordinary work without compensation, without recognition, and, so far as the general public is concerned, without honor. To these men it will be a rather trying experience to feel that the man who comes back to his own, and is puffed with pride and superfluous dignity, will not consent to adjust himself to the level of his former associates. One can quite easily understand how the medical man who has received honors and promotions, and has occupied places of great responsibility, and who has profited by his experience abroad or in the cantonments, will feel that he did not receive sufficient recognition for his sacrifice while in the army medical service. The majority of men, however, who come back to their former locations, will gladly drop all titles of superiority, and work as they worked before, co-operating, relieving desperate situations, and feeling that they are back again to do their work among the civilian population.

One must remember, too, that some of the surgeons and medical men, in spite of the fact that they have broadened out and grown better from their experience, will carry with them, for a time at least, a problem which they must solve for themselves. Army life is quite different from civilian life. In the former there are regularity, discipline, and a systematized method, although it is routine in character. These men, too, have associated for months or years largely with men, and to again resume their association with all classes of people who live and think in a disordered manner, will probably bore the disciplined men unless they are big and broad-minded. It is going to be difficult for these men to adapt themselves to the wailings, the whinings, and the reiteration of commonplace symptoms; and it would not be strange if the army officer, seeing the suffering, the horrors, and the mutilation of the wounded soldier, who has borne up heroically, should not minimize the complaints of his patients in daily practice. He would be a strange man indeed if he could adjust himself uncomplainingly; but that is what the man who has been obliged to stay at home has done, taking care of the trifling illnesses, listening to the domestic disturbances, and to many complaints of symptoms that are well known to all medical men to be immaterial. However, all this will probably adjust itself in good time, because the practice of medicine must be carried on as it has been, and many of the medical officers will find it necessary, from a financial point of view, to resume their former positions in life.

The stay-at-home will put up with a moderate amount of conceit for a time, but, if it is carried too far, he will rise in his wrath and condemn it, first, because it is not a logical position to perpetuate, and, next, because he feels that by staying at home he has perhaps accomplished something in the way of sacrifices; at least he has given of himself, his energies, and of his finances almost enough to counterbalance the sacrifices made by the soldier.

Then, too, there is the question of the formation of factions or cliques which in itself is quite natural; but even this may be carried too far. Of course, all of this has been very sharply emphasized by the epidemic which has swept over the world, and the man in the small town and in large cities has had to work harder and probably without increased compensation, to take care of those who were around him.

Then, too, the ethical problem comes up for adjustment: How shall the man who is at home successfully return the patient to the man who is away? This may be done in a large number of instances, but in some cases it would be almost a physical impossibility, due to the fact that the people are very changeable. They like to change doctors purely for self-satisfaction. The argument on the other side of this proposition is that many of the people will consider the returned medical officer as almost a superman in his line of work, and they will speculate on the fact that he has had an enormous experience, and that he, of the two—the returned officer and the home medical man—will probably receive more attention and will stand in a much higher light. But these problems, like many other seemingly difficult problems, will have to solve themselves, and their solution will depend upon the individual man—whether he is the man who went away or the man who stayed at home—and the man who stayed at home need not feel any great surprise or disappointment if many of his patients leave him for the returned officer. If we could all get together on this proposition of accepting things as they come, appreciating

the efforts, the sacrifices, and the experiences in the man who has served his country, the problem would be a comparatively simple one.

One fortunate circumstance seems to have been already settled—that is, that the man who has seen the horrors and the difficulties of actual hospital work abroad wants to forget it as rapidly as possible; at least, that is the status of the returned soldier, who is not inclined to boast, and he does not wish to rehearse, even to his friends or to himself, the horrors of war; and this in itself may make it easier for all of the doctors to get together on a common level. There is no denying the fact that, as has been said before, many of these medical officers have developed astoundingly. They have been given an opportunity, have seized it, and have widened their horizon; and these modest, cultured, and sensible medical men will make the position of the medical profession much easier to deal with.

Of those who have served their time abroad and in the home cantonments, a certain number have given up their lives, either through injury or from disease, and we must honor their memories, recall their deeds of valor, and show that we appreciate in every way their efforts, even though they do not return to their homes and families. Doubtless, many memorials will be presented to the medical societies throughout the country, which will put the deceased men on the honor roll, and give them first place; and following this will be the honor roll of the men who return, whether sound in limb or wounded, seriously or otherwise.

LOCAL MEDICAL SOCIETIES

We desire to call special attention to the paper on page 37 of this issue by Dr. E. M. Ransom, of Minot, N. D. We shall discuss this subject editorially in an early issue; and in the meantime we shall be pleased to have suggestions from our readers as to how the life of our medical societies can be revived.

CORRESPONDENCE

THE TREATMENT OF INFLUENZA

To the Editor:

It is not out of the way for a practitioner to write his notes on rational treatment of influenza (Spanish) and the pneumonia or intoxication following it. I write this to show one method of combating the disease. In about 400 cases of influenza I have used my own method, which I will put forth for the medical fraternity.

The pessimists who simply shrug their shoulders when they have a desperate case of influenza pneumonia on their hands are entirely wrong. We have reason to fight to the last resource and not give up. I have won many desperate battles this fall with my line of treatment.

Simple Spanish influenza among grown people or pneumonia is treated in the same basic manner. Treatment of younger patients differs very little from that of the older patients in size of doses or otherwise. The simple influenza cases are given only one, or possibly two treatments.

I come to patients with temperatures of from 99° to 106°, with lung findings definite or indefinite, with pneumonia or no pneumonia. There is *always* an infection. I give them hypodermically 3¾ gr. to 7½ gr. quinine dihydrochloride solution under the skin, also a camphor-oil dose hypodermically; and then prescribe quinine in 2-5 or 10 gr. doses with an aspirin tablet (the doses of quinine are altered according to the conditions that may arise); also 1/30 grain strychnine in tablets. I also give a creosote preparation (calcreose tablets No. 2) swallowed with 15 to 20 drops of tincture chlor. ferric in sweetened water three times a day. The hypodermics are repeated daily or every two days as needed, or used even two or three times in twenty-four hours on a critical day, if necessary. If urinary symptoms arise, I use some of the standard sodium benzoate with a caffeine solution in ampules. I give this hypodermically instead of the quinine, and I find that the infected patient rallies wonderfully even in the double pneumonia with hemorrhage and rusty sputum galore.

If treated early, pneumonia or no pneumonia, if the heart is not spoiled before by repeated attacks of articular rheumatism or otherwise or the patient is not already absolutely drowned in his own secretions, I find the most gratifying results. I have not used more than 18 gr. hypodermically in twenty-four hours. Besides 5 gr. doses every six hours of the quinine by mouth, I give also 1/100 to 1/50 gr. digitalin in the hypodermic solution once or twice in twenty-four hours. Generally, one hypodermic in twenty-four hours is all that I have given.

My patients are mostly country people, but even here I have in several cases had the satis-

faction of following up my method of three treatments in twenty-four hours with complete crisis while I waited. One of these cases was a violent double pneumonia in a patient who had had pneumonia some years ago.

Quinine does not depress the heart alarmingly when given in the way mentioned, but is suiting the infected client to the great satisfaction of everyone concerned. I use, of course, some expectorant, attend to the eliminations, as well as using our various counter-irritants. Cotton-jackets are advisable. If obtainable, a little brandy is all right mixed with egg-nogs; besides orange juice, warm or cold milk, and water, etc.

A newspaper clipping sent to me telling of Dr. Leitner's experience with influenza and pneumonia made me believe that I am justified in not being a fatalist. Dr. Leitner is professor at the University of Kolosvad, Hungary. The clipping says:

"After searching bacteriological experiments, he has proved that the infection is caused by an unknown bacterium, a diplostreptococcus, causing the pneumonia, that in reality must be considered an infection of the blood. In his practice, Dr. Leitner has found mercury bichloride, in 1 to 1000 solution, given intravenously, an exceedingly good remedy for combating this disease. He uses 3 milligrams to the dose and repeats it once, sometimes twice. The patient's condition has improved rapidly and these injections have also a prophylactic office against pneumonia.

"At the Undine Hospital, where he is chief physician, there were, before this treatment was used, 80 per cent death-rate in the pneumonia cases, now there are 100 per cent recovery."

I contend that in the approximately 400 cases I have had under my observation in a general practice, I have not lost a case that had not been hopeless for the best therapeutist in our land. Eight of my patients have died, but they could have been given up from the first. One has had acute articular rheumatism three times; four used the neighbors' home remedies of hot beer and hot slings for five days to a week before the doctor was called, and continued using them afterwards; one had tuberculosis and died from a relapse a few days after a full crisis; one died of heart failure the day he had a full crisis, as he left the bed to urinate and so forth.

One or two injections are all that are needed to get the subnormal temperature I like to get in ordinary cases. They may be given at an interval of a couple of days, according to indications in the so-called plain influenza infection. Children from two to eighteen years of age should all recover if not handicapped by some other undermining trouble of long standing. For children under ten years of age, I do not give hypodermic injections except in extreme cases.

This optimistic statement from the North Dakota prairies may, or may not, be of interest, but it is one view of a great question.

Very truly,

CHRISTIAN JELSTRUP, M.D.

Petersburg, N. D., Dec. 27, 1918.

MISCELLANY

REPORT OF THE SOCIAL SERVICE DEPARTMENT OF THE FREE HOSPITAL AND DISPENSARY OF THE UNIVERSITY OF MINNESOTA

In this report, just issued by the University, will be found a clear and comprehensive account of the character of the social work that needs to be done in every city; and it is pleasing to have so large a fund of information placed within a 16-page pamphlet.

The number of patients receiving the benefits of the service during the past two years is 3,592. The varied character of the work and the many problems to meet and solve are enumerated; and specific illustrative cases are given. The whole pamphlet is so full of interest we cannot but wish that every physician, and every man and woman interested in social work and its problems so full of difficulties as to baffle the wisest persons, would read this report.

In order to stimulate interest in this work, we reprint its brief introduction:

"The sick-poor" is an unpleasantly suggestive term. It suggests so many things. That they are sick and that they are poor are terms which carry with them too often the ring of a reproach. That they are "down and out" is usually assumed to be their own fault. Ignorance and incompetence, of course, have let them down and bowled them out; but how far is society responsible that they did not know and could not make good? Likely, vice has laid its fateful finger upon their misfortune; but did any social sign-post point them the other way—did any social influence put its protecting arms about them before they became sick and poor? How much might have been done by way of prevention, that now is possible only by way of cure? And how much of protection and enlightenment is being given to them now?

Free dispensaries and hospitals have been built and manned and equipped for the sick-poor, and they have failed and are failing very largely in the fulfillment of their function; for want, first, of a fair conception of their purpose, and for want, second, of an efficient mechanism for pushing their purpose home.

In so far as they are regarded and conducted as instruments of philanthropy they fail in large measure to help those who need their aid; while they are abused by those who do not need it and ought not to receive it on these terms.

In so far as they are supported as agencies of service, as means by which a measure of social justice may be done, they often lack only the mechanism of a social service organization to insure their success. Without it, again, they fail of real merit and results.

None are more conscious of the difficulties of dealing with the sick-poor than the men and women of the medical profession who give much of their time and energy to the conduct of free hospitals and dispensaries. None know better than they that "the destruction of the poor is their poverty." To take care of those who can not take care of themselves is a task hopeless enough unless that care can be extended to the home and to the general circumstances of the patient. To make a man well to the point of returning him to half-way efficiency and to return him, at the same time, to the conditions of life or the ways of living which have made him sick and are likely to make him sick again, is in the end to fail and at great cost of failure. To carry the recurring burden of his repetitional cure and to remain helpless in the prevention of the causes of his disease is a very hopeless task.

Out of the perplexity of this problem of the sick-poor, or of the temporarily impoverished whom sickness has disabled, the social service worker has been born. Medical social service has become the efficient and the saving grace of the free hospital and dispensary systems of today. It began its reforming and informing campaign in the Massachusetts General Hospital of Boston, some years ago, and it has gradually extended itself to other cities and to other systems.

Two years ago, a social service department was organized at the University of Minnesota in immediate relation to its free dispensary at the Medical School, where, as elsewhere, for a generation past, the sick-poor have been the objects of state charity and unorganized philanthropy to their immediate help, but too often to their ultimate hurt.

Miss Marion A. Tebbets, a woman of training and experience, was placed in charge of the department. A small budget, which permits of the employment of but two or three additional workers, was provided by the University.

The Department's two years of work has accomplished much, a phenomenal much with so small a force, —and yet those who are most closely in touch with the service feel that it is but an aggravating suggestion of its potentiality for good, that it only serves to whet the appetite of its workers for the possibilities of success which await them.

A brief summary of the statistics of the department's doings in these two years suggests the volume and the interrelationships of the service.

NEWS ITEMS

Dr. S. S. Shannon has moved from Wadena to Crosby.

Dr. Earl Crafts, of Minneapolis, has moved to Carthage, S. D.

Dr. E. W. Arnold has moved from Watertown, S. D., to Adrian, Minn.

Dr. C. S. Jones has moved from Williston, N. D., to Anoka, Minn.

Dr. G. H. Just, of Pukwana, S. D., died in November of pneumonia following influenza.

Dr. John S. Abbott, of St. Paul, who escaped from a German prison, is expected home soon.

Dr. C. B. Rydell, a graduate of the University of Minnesota, Class of '19, has located at Aitkin.

Dr. J. D. Fuller, of Plaza, N. D., is doing postgraduate work in Chicago, at the Postgraduate Hospital.

Dr. H. S. Tanner, who fasted for 42 days in Minneapolis in 1877, is dead in California at the age of 91.

Miss Mildred Mauseth, a student nurse at the Swedish Hospital, Minneapolis, died last week of pneumonia.

Dr. L. A. Feldman, Indian Agency physician at White Earth, has resigned his position, and will return to New York.

Dr. H. E. Taylor has taken the practice of Dr. J. H. Vallency at Fessenden, N. D., the latter moving to Chicago.

An attempt will be made this winter to get a law passed to make compulsory physical education in the public schools of the state.

Dr. Otto R. Olsen, of Winona, died last month at the age of 40. Dr. Olsen was a graduate of Rush, and was a resident of Winona all his life.

Dr. Edward P. Ryan, of St. Paul, died on December 31, 1918. Dr. Ryan was a graduate of Rush, Class of '86, and came to Minnesota in 1893.

Dr. A. G. Moffatt, of Howard Lake, who has been a captain in the service, will locate at Litchfield. He practiced at Howard Lake for over twenty years.

Dr. L. D. Cramblit, of Lake Andes, S. D., recently died of pneumonia following influenza, at the age of 33. He was a graduate of the Iowa University, Class of '09.

Dr. Earle W. Gilroy, of Minneapolis, died on December 30 at the age of 25. He was a gradu-

ate of Rush, and a member of the Medical Reserve Corps as pathologist.

Dr. Frank C. Titzell, of Iowa City, Iowa, has located at Harvey, N. D. Dr. Titzell was formerly professor of surgery in the Medical School of the University of Iowa.

Dr. Clarence W. Andersen, of the staff of the Mayo Clinic, died last month at the age of 33, of pneumonia. Dr. Andersen was a graduate of Louisville Medical School.

The school nurse has proved her worth during the past year as never before, and the press of the entire Northwest is demanding that she become a permanent institution.

Dr. W. B. Wright, assistant superintendent of the City and County Hospital of St. Paul, resigned last week, and Dr. Ancker, the superintendent, will appoint his successor.

A wealthy mine owner of Chisholm, who recently died, left half of his estate, said to be $20,000,000, for medical research work at Harvard, Johns Hopkins, and Columbia.

Dr. Lewis A. Iverson, of Christine, N. D., died last month at the age of 54. Dr. Iverson was a graduate of the Medical School of the University of Minnesota, Class of '97.

Dr. Clara S. Eirley, who has had charge of the Woman's Department of the State Hospital at St. Peter for the past five years, has resigned her position, and will take a long rest

The physicians of Winnebago City have adopted the fee bill recommended by the Blue Earth Medical Society. It is so moderate that one wonders how prices could ever have been lower.

Dr. Bret V. Bates, who was gassed in the Argonne Forest, is rapidly recovering, and will soon return to Wheaton to resume his practice. He was made a captain for meritorious and efficient service.

"Joseph Thill," the plaster doctor of Wisconsin, has been charged, by a coroner's jury of South Dakota, with causing the death of a boy who died of blood-poisoning, due to the application of a plaster.

The City of Portland, Oregon, conferred a gold medal upon Dr. Torfin Tharaldson, of Cottonwood, for his services in connection with the epidemic in that city, where he was located as an army medical officer.

Dr. Thomas M. Thayer, of Herman, died of pneumonia on December 22, at the age of 42. Dr. Thayer was formerly on the staff of the State Hospital at Fergus Falls, and had practiced for the past ten years in Herman.

Dr. C. R. Christianson has moved from Starbuck to Morris. Dr. Christianson is a graduate of the University of Minnesota, Class of '96, and has practiced many years in Starbuck. He was a captain in the Medical Corps.

Mr. Otto F. Bradley, formerly assistant secretary of the Wisconsin Anti-Tuberculosis Association, succeeds Mr. Paul L. Benjamin as secretary of the Anti-Tuberculosis Committee of the Minneapolis Associated Charities.

Dr. Edward Gans, formerly of St. Cloud, but now of Judith Gap, Montana, has been made a captain, his commission dating November 11, 1918, the day the war practically ended. Dr. Gans is a Minnesota University graduate, Class of '05.

The public health department of Minneapolis, unless the legislature blocks the plan, is to be expanded into a department of influence and large usefulness; and it will be taken out of politics so far as our distance from the millennium will permit.

At the annual meeting of the Red River Valley Medical Society, held in December, the following officers were elected: President, Dr. F. M. Dryden, Crookston; vice-president, Dr. O. E. Bratrud, Fertile; secretary-treasurer, Dr. A. H. Kahala, Crookston.

South Dakota is making an enviable record, especially in the Army, for the health condition of the men sent into service. In the matter of venereal diseases it is near the head of the list in its clean record. Other northwestern states follow closely in the list.

St. Paul, with Minneapolis a close second, shows for 1918 the lowest death-rate among the leading cities of the country. The rate varies from 13.9 per 1,000 inhabitants for St. Paul to 26.8 in Baltimore. The Philadelphia rate of 17.1 in 1917 jumped to 24.2 in 1918, due to the epidemic.

Lieut. Hubert Van de Erve, M. C., U. S. A., who was called into the service last September and was awaiting embarkation orders at an eastern camp when the armistice was signed, has received his discharge and returned to the Swedish Hospital, to complete an interneship of twelve months.

An onion poultice is said to be a sure cure for pneumonia, and the prominence given its virtues by the country press may increase the price of

onions. A newspaper published in one of the cities of Minnesota says such a poultice is commended by "The Health Boards of Washington, D. C., and New Jersey."

Dr. Otto F. Johnson, who has practiced at Winthrop for fifteen years, will take over the practice of the late Dr. Olander of St. Paul, with his office at 833 Payne Avenue. Dr. Johnson is a graduate of Hamline, Class of '02, and went to Winthrop after serving a year's internship at the Bethesda Hospital of St. Paul.

Influenza and pneumonia were made reportable diseases by action of the Minnesota State Board of Health on October 8, and this fact was circulated to the physicians in the state, but as yet they do not seem to realize the necessity of reporting their cases. Unless such reports are made complete data of the epidemic cannot be compiled.

The banquet at the meeting of the Southern Minnesota Medical Association to be held in Mankato next week, will be served by the ladies of the local chapter of the Eastern Star, and will be in the honor of Dr. J. H. James, of Mankato, and Dr. George F. Merritt, of St. Peter. The program of the meeting appears elsewhere in this issue.

Dr. Cornelius Williams, of St. Paul, died on December 30 at the age of 70. Dr. Williams graduated from Columbia, Class of '74, and came to Minnesota in '83, residing in St. Paul over thirty-five years. Dr. Williams was a specialist in eye and ear diseases, and was a man highly respected for his professional abilities and his personal character.

Minnesota, and other northwestern states to some extent, has had four serious epidemics within three years: an epidemic of infantile paralysis, one of smallpox, one of cerebrospinal meningitis, and the present one of so-called Spanish influenza. The present epidemic caused nearly 6,000 deaths in Minnesota in 1918, most of them in the last three months of the year.

The Seventh District (Sioux Falls) Medical Society of South Dakota held its annual banquet and election of officers on January 7. The following officers were elected: President, Dr. J. B. Eagan, Dell Rapids; vice-president, Dr. W. E. Donahue, Sioux Falls; secretary-treasurer, Dr. S. A. Keller, Sioux Falls; censor, Dr. E. E. Gage, Sioux Falls; delegate, Dr. J. G. Parsons, Sioux Falls.

Dr. H. M. Bracken, the executive officer of the Minnesota State Board of Health, has appointed the following committee to study the epidemic reports of the state: Dr. C. E. Smith, Jr., assistant secretary of the Board; Dr. E. T. F. Richard, St. Paul; and Dr. J. G. Cross, Minneapolis. It may be confidently predicted that this committee will gather data and embody the same in a report of great value.

Dr. Otto L. Winter, of St. Paul, died last month, of pneumonia at the age of 30. Dr. Winter graduated from the University of Minnesota, Class of '15, and spent a year as interne at the University Hospital. He then became associated with Dr. A. J. Gillette, of St. Paul, in orthopedic work. He entered the Medical Reserve Corps early, and did work in several eastern camps, and was then transferred to Fort Snelling. He went home (River Falls, Wis.) to spend Christmas, and died very suddenly.

The following officers were elected by the Hennepin County Medical Society at its annual meeting last week: President, Dr. J. C. Litzenberg; first vice-president, Dr. J. A. Watson; second vice-president, Dr. Douglas F. Wood; executive committee, Drs. W. R. Murray and E. K. Green; board of censors, Drs. H. B. Sweetser and D. O. Thomas; trustees, Drs. J. W. Bell and C. A. Donaldson; delegates, Drs. J. G. Cross, R. E. Farr, L. A. Nippert and J. E. Hynes; alternates, Drs. Nimrod Johnson, E. J. Huenekens, C. P. Nelson and J. S. Reynolds.

The Swedish Hospital of Minneapolis presented as a Christmas greeting and souvenir to its nurses, staff of physicians, and hospital association members, an Honor Roll in booklet form, containing the name, military address, and home address of each of the seventy graduates of its training school who is in active service with the American Red Cross. Supt. Olson reports that of 126 graduates actively engaged in nursing, 82 enlisted for Red Cross war service, and 70 were assigned to duty before the signing of the armistice. Twenty-one are in service overseas. The Swedish Hospital Training School now numbers one hundred pupils.

PROGRAM OF THE ANNUAL SESSION OF THE SOUTHERN MINNESOTA MEDICAL ASSOCIATION

Mankato, January 20 and 21, 1919

ANNOUNCEMENTS

Physicians are requested to bring their ladies.

The physicians of Mankato will entertain the visiting physicians at the annual dinner at the Masonic Hall, Tuesday, January 21, at 12:00 M.

The public is invited to attend all scientific sessions.

EVENING SESSION

Monday, January 20, 1919

Annual banquet at Masonic Hall, Monday evening, January 20, 1919.

President's Address.

Fractures Considered as Potential Deformities. Dr. M. S. Henderson, Rochester.

Some of the Old Hospitals of London, with Special Reference to the Surgical Treatment of Fistula in Ano as Perfected at St. Mark's. Dr. W. J. Mayo, Rochester. Discussion by Dr. Archibald McLaren, St. Paul.

Refractive Needs in Children. Dr. Earl A. Loomis, Minneapolis. Discussion by Dr. E. W. Benham, Mankato, and Dr. J. H. James, Mankato.

Acute Mastoiditis. Dr. J. D. Lewis, Minneapolis. Discussion by Dr. V. I. Miller, Mankato, and Dr. Horace Newhart, Minneapolis.

Placenta Previa and Abruptio Placentæ. Dr. M. J. Jensen, Minneapolis. Discussion by Dr. G. A. Dahl, Mankato, and Dr. C. G. Weston, Minneapolis.

The Open and Closed Treatment of Fractures—New Methods and New Apparatus Used. Dr. A. E. Wilcox, Minneapolis. Discussion by Dr. A. N. Collins, Duluth, and Dr. A. R. Colvin, St. Paul.

MORNING SESSION

Tuesday, January 21, 1919

Annual Business Meeting, 8:30 sharp.

Scientific Program, 9:00 o'clock.

Röntgen Examination in Eye-Injuries, with Foreign-Body Localization. Dr. C. A. Donaldson, Minneapolis. Discussion by Dr. W. L. Benedict, Rochester, and Dr. Russell D. Carman, Rochester.

A Neisser Luetic Outlook. Dr. Harry A. Baker, Minneapolis. Discussion by Dr. Harry Irvine, Minneapolis, and Dr. F. R. Wright, Minneapolis.

The Treatment of Chronic Empyema. Dr. C. A. Hedblom, Rochester. Discussion by Dr. J. W. Little, Minneapolis, and Dr. S. C. Schmitt, Minneapolis.

The Child Welfare Division of the State Board of Health. Dr. E. J. Huenekens, Minneapolis. Discussion by Dr. Helen Hielscher, Mankato, and Dr. J. H. Adair, Owatonna.

Basal Cell Epithelioma. Dr. A. C. Broders, Rochester. Discussion by Dr. Gordon B. New, Rochester, and Dr. A. W. Adson, Rochester.

A Toast to the Minnesota Medical Men in Service at Home and Abroad. Dr. Harry J. O'Brien, St. Paul.

AFTERNOON SESSION

Prophylactic Inoculation Against Pneumonia and Influenza. Dr. E. C. Rosenow, Rochester. Open to general discussion.

Chronic Ulcerative Colitis. Dr. Arthur H. Logan, Rochester. Discussion by Dr. E. T. F. Richards, St. Paul, and Dr. Frank S. Bissell, Minneapolis.

Epidemic Influenza. Dr. James S. Gilfillan, St. Paul.

Legal Aspects of Medicine and Surgery. Hon. Geo. W. Peterson, St. Paul.

PUBLISHER'S DEPARTMENT

LAVORIS

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THE
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THE CONTROL OF VENEREAL DISEASES*

By C. E. McCauley, M. D.
ABERDEEN, SOUTH DAKOTA

INTRODUCTORY REMARKS

Dr. R. E. Woodruff, head of the South Dakota State Sanatorium for Tuberculosis, at Custer, was to give a report, but unfortunately he could not do so, and he asked me if I would not make this report for him, as to statistics. I am sorry that we could not have had this report, because Dr. Woodruff is at the head of what is going to be the largest public institution in this state. They have been working out there with about forty beds, but the legislature saw the light some time ago, and they have just completed a pavilion now which will admit fifty new patients, and another which will admit fifty more early in the fall. So they will have room for about one hundred and forty to one hundred fifty patients, and they are open now for any cases of tuberculosis in the incipient stage, that any practitioner in the state wants to send.

I might say for those of you who are not familiar with the law, that the charges are eleven dollars a week. A patient must be admitted through the county where he resides. He must be a resident of the state. This eleven dollars a week is to be paid by the county, but the county judge and the state's attorney require the patient to reimburse the county in case the patient has any property. He must execute a bond to pay that money to the county, but the county will take care of and pay all bills, and, if the patient is indigent and cannot pay for it himself, it is paid for by the county. It is very much the same as our insane asylum work is carried on.

This paper on venereal diseases is not original. It is simply a copy of some reports that I received from Dr. Martin.

During the twelve weeks ending December 7, 1917, there were reported, from 31 cantonments, 21,742 new cases of venereal disease. The incapacitation of these men not only involves loss of time, but, in addition, it has cost the Government to keep them during the period of hospital confinement, which varies from one to eight weeks, more money than is required to maintain the entire command at Camp Dix (the cantonment in New Jersey with 20,859 men), plus an additional sum for medical treatment.

This is not all. Inevitably, the disease will relapse in hundreds of these cases, in many instances after the men have been transported to France and presumably put into condition for service at the front, at a cost to the nation of probably $1,500 for each man.

Surgeon General Gorgas made a public statement last fall to this effect (I cannot quote his exact language), that, if he had to choose between having one hundred men wounded in battle and having one hundred men infected with venereal disease, he would choose to have the wounded men. (The average wound heals in about eleven days. Venereal diseases cause more hospital days in military posts than all other communicable diseases except measles.)

The important fact in this connection is that a large proportion of venereal-disease cases originate, not in the camp or in communities surrounding the camp, but in cities and towns from which the men come and through which they pass on the way to camp. The Reports from the Surgeon General's Office show that the enormous cost to the Government on account of

*Read at the 37th annual meeting of the South Dakota State Medical Association, at Mitchell May 22 and 23, 1918.

venereal disease is due largely to conditions in civil life.

In his report for 1916, the Surgeon General of the Army says, "It should be understood that the prime source of infection in venereal diseases lies, not within military jurisdiction and control, but in the civilian life."

A study of the above facts shows an urgent need for an organized attack simultaneously by all States, on the problem of venereal disease. When only a few States deal with the problem spasmodically, the result is to drive the principal carriers (prostitutes) from one state to another. State and city authorities should now co-operate in an organized attack on these diseases. Mayors, Governors, State Boards of Health, City Boards of Health, State Councils of Defense, Chiefs of Police, Police Judges, District Attorneys, City Attorneys, Superintendents of Hospitals, and educators must all do their part, and deal vigorously and promptly with the problem.

Last January the South Dakota State Board of Health adopted regulations making syphilis and gonorrhea reportable diseases. This is the most important step in this relation that has ever been taken in this state. In a word, it places these two diseases where they belong. It is the result of a straightforward, logical, scientific point of view, unbiased and untrammeled by any smaller consideration than that of the public health of this great state, and is prompted by the conviction that boards of health and physicians are, to a large degree, responsible for that public health. It adds a powerful factor to the public hygiene, and is destined to define more clearly the relation between physician and society.

It it certain to stimulate the unthinking practitioner, whose motto is "The way we did twenty years ago is good enough for me," into a realization that there is a sociologic and scientific progress for medicine, as for every other branch of human endeavor; that, as society develops, the relation of its various parts change, and he who will not see the movement will be swallowed up in it.

The secrecy maintained in regard to venereal diseases has led to a neglect of these diseases by the general practitioner. The symptom once eradicated, the patient drops from view, and is still exposed to the ravages of the disease. The physician is deprived of clinical observation, valuable, not only to his own further development, but to the health of the community.

Diseases neglected in treatment will be neglected in study. It is the constant cry of the specialists that the knowledge of the general practitioner, in the matter of venereal diseases, is lamentably defective.

Professor Fenger has said that we shall never make progress in the treatment of syphilis and gonorrhea until people have been made to understand that, instead, of being ashamed of and not fearing these diseases, they shall not be ashamed of, but fear them. The public can be made to understand this only by placing these diseases where they belong, with the other infectious diseases.

When these diseases are reportable, both doctor and patient are placed in a position of joint responsibility as regards the public health. The physician's interest is kept alive, and it is of incalculable educative value for the man who is carrying about with him a disease to know that it is regarded, not as a concomitant of manhood, but as a pathological condition, and to be forced by public measures to consider himself a menace to others, whether he evades the law or not.

Let the public realize that we range ourselves on the side of law and order and justice. Let the physician respect the confidence of his patient, but let him scorn the confidence of the man who would deliberately do a criminal act and make him a party to it. There may be those who will prate of professional secrecy, but in their souls they will esteem and admire the man who can rise above an antiquated tradition in order to save even one woman from the results of either one of these diseases.

Physicians in the world and of it, have shared the universal error of secrecy. We may safely say, until now, this is an error. We may also confidently assert, speaking for the world, or rather for those who make the world worth while, that the doctor who now lends himself to the policy of secrecy makes himself the accessory to a crime. It is not only his duty to take a stand for the public good, but it is also his duty to assert this attitude toward those of his profession, who, through ignorance, mistaken ideals, or absence of professional honor, create an opposition which is destined to deprive medical practice of its right to be called a profession.

It is estimated that there are 11,700 cases of syphilis among adults in South Dakota. There are at least five times as many cases of gonorrhea.

Now, just how can the general practitioner get results working under the new regulations?

Every case is reportable, the same as other

cases of infectious diseases, except in this case the name of the patient need not be given, but he should be designated by number. He should be told the nature of his disease and that he has been reported as having an infectious disease,—and that he must report for treatment until cured. If he desires to change locations or change physicians, he can be transferred to another doctor, but he must be under observation until cured. If he quits treatment he is to be reported by name, and then it becomes the duty of the health officer to take such measures as he deems necessary for public safety.

He is to be told how to care for himself and others, and if he does not obey orders he is to be isolated or quarantined, as in any other dangerous disease. The fact that he is being watched has a good effect upon even the worst culprit.

In case a patient cannot afford to pay for treatment he is to be treated as other charity cases; either by the county physician or other recognized charitable organization, the same as a patient with diphtheria or other infection who might apply for charity treatment. In case it is necessary to isolate the patient he can be isolated on his own premises or in the regularly appointed manner of caring for other isolatable or quarantinable diseases.

The reporting of venereal cases and their subsequent supervision until cured make it impossible for any patient to defeat his own cure; no matter how careless he may be or how lightly he may regard his disease, the best modern State Board of Health legislation compels the venereal patient to remain under the treatment of some physician or some dispensary until clinical and laboratory tests show him to be cured.

Hospitals should be educated to take these patients and care for them the same as they do for patients with other diseases.

Dr. J. H. Baldy, of Philadelphia, reports that the Pennsylvania Bureau of Medical Education and Licensure, on January 1, 1917, requested 186 hospitals of that state to make provision "for the admission of venereal cases, of cases of purulent ophthalmia, and cases of vaginitis in children." Up to January 18, 1918, 156 hospitals had acquiesced to that request; a number of hospitals had shown hesitation; and a few had refused. Dr. Baldy states: "The Bureau is fully convinced that any State Board which will vigorously take hold of this proposition can accomplish equal results in their own state, and it further believes that the greatest difficulty in the reform of all hospitals lies, not so much with the management, as with the medical men."

To summarize the practical attack on venereal diseases, it may be said that the first line of attack, consisting of the discovery, treatment, and control of infected individuals, should be led by the health departments co-operating with clinics, hospitals, and private practitioners; the second, comprising the efforts to eliminate environmental conditions favorable to their dissemination, must be led by the police departments co-operating with courts, law-enforcement agencies, and citizens; the third, directed toward protecting the uninfected, can best be led by the school departments co-operating with moral and social agencies and parents. In all the diverse activities of these three major lines of conducting this health conservation battle, there stands out prominently the need for enlisting the forces of the community for a long period of years if permanent gains are to be made. It is necessary that the members of the medical profession, as well as other leaders of the community, shall frequently review these facts in order that they may have the courage and the persistence to convert this problem from one of the conspicuous failures of public health to the conspicuous success which science has made possible.

DISCUSSION

Dr. Mortimer Herzberg (Vermilion): I have probably had as much opportunity to study this subject as any one man, and I rather think that the question of secrecy is the large problem which we will have to combat. For about two years now the laboratory under my charge has been in the habit of making Wassermann tests. The rules promulgated by the Board of Health or laws were adopted. The tests had been charged for at the rate of $5.00 each. When these rules were put forward they stated that these tests and examinations for gonococci, and examinations by means of the Wassermann test, would be made free. This was perfectly proper, and I was heartily in favor of it, although it has cut our income down quite considerably. So long as the diseases were without the control of the Board of Health, I felt that this was private work, and that it was perfectly justifiable for the laboratory to charge a fee. As long as these cases are now under the control of the Board of Health, they should be treated precisely in the same way as any other contagious disease, and, in the matter of the laboratory work, no matter what the work entails, they should be handled free.

Our experience has been this, that even when we charged we were able, in a very large percentage of the cases, to get from the physicians the name and address, and other data concerning gonorrheal and syphilitic infection. We insisted on it, and we eventually got it in the larger number of specimens submitted. I believe, personally, that it is a distinct step backwards to regis-

ter these cases by number. It simply throws an additional veil of secrecy upon a thing where we should insist on no secrecy. There used to be a time, as you all know, when it was a disgrace to have a member in the family tubercular. The existence of cancer in a family was also considered a very disagreeable matter; and it is only by registering these cases by number and not treating them frankly, openly, that we are going to stay in the same secret area in the case of venereal diseases. I believe a record of each one of the patients should be made, to know that his case is registered,—who he is, where he is, where he is likely to go, and all about him, at some central place, and to be watched for and not merely attempted to be kept track of by number.

It makes a practically impossible method of following these cases to have them come in by number. We are in a quandary in the Laboratory, how to file our records. Dr. Jones of one place sends in a case, say, No. 243, and Dr. Somebody Else sends in case No. 469. Suppose these cases cross—that one goes to one physician, and the other goes to another. You have no way, from the central office, of finding out anything about these cases. You are absolutely lost. and if your physician neglects and does not care to follow up these cases,—and he will not because he does not do it with other things,—you have absolutely no control. You are merely doing a Wassermann free of charge.

I believe that these patients should be reported by name to some central office, and I think that the physicians can be trained to do so, and patients must be made to understand that they will be reported. It is merely a question of our conniving again at a thing which we should not stoop to do.

These cases should be treated the same as any other type of infectious disease. We attach to the disease a stigma, which is a thing we will have to get away from if we are going to train the public, and get them to know the seriousness of these matters.

I believe the public is pretty well aware of the situation. There has certainly been no lack of information in the public press, of one kind and another; and the thing to be insisted on is their co-operation, just the same as we would expect in any other type of infectious disease.

I should like to see the Board of Health amend that regulation in some such way so that they would have on file in their office all the time, by name and address, every one of these patients, and see that the physicians give such information.

I will say just one thing more, and that is in regard to the types of disease. We have been doing an increasingly large number of Wassermann tests in the Laboratory, but I recall only two specimens that were sent in for gonorrheal infection, and those came from physicians right in our own town.

Of course, as everybody knows, the percentage of infection with gonorrhea is probably many times as high as the infection of syphilis.

Dr. J. G. Parsons (Sioux Falls): I have wondered, since I have been receiving these reports of the morbidity status of South Dakota—since the State Board of Health has been issuing them—whether or not there was possibly some lack of care on the part of the medical profession in reporting the cases of gonorrhea, or whether, suddenly, South Dakota had got to be so blooming virtuous that you would only find one or two cases of gonorrhea reported as a maximum in any county in the state. Evidently the profession has not taken very seriously the requirement of the State Board of Health that venereal diseases be reported.

There is one thing particularly, in which I am interested, along the line of the conservation of babies' vision, and that is at least the reporting of cases of gonorrheal ophthalmia. I have on repeated occasions tried to emphasize the necessity of doing these things, upon the gentlemen who are doing obstetrical practice; and it is really surprising to me to find out how many really good men not exactly pooh-pooh the idea, but shrug their shoulders, as it were, and think this is a sort of ultra-refinement of being particular, that the man who is interested in ophathalmology wants to get it done so that he can have statistics to talk about.

I recall one time I attended a medical society meeting—it was not in South Dakota, by the way, so it lets us out. I spoke very emphatically along this line, and I said, "I want you men to 'fess up. I want the men who are here to tell me how many of you make it an habitual thing to make a prophylactic instillation of silver in the eyes of new-born babies." I think there were somewhere in the neighborhood of thirty physicians present, and I believe there were five of them who admitted it. The rest of them were honest, and said they did not do it. Then a couple of the older men said that that was their practice, and got up to explain that they had been negligent in regard to the matter; and it was only after having had the experience, after a number of years practice, and not encountering any ophthalmia neonatorum, of having a couple of babies go blind on them, that they concluded that it was a pretty important thing to do.

Just recently I had a case of gonorrheal ophthalmia in a baby that was a couple of weeks old, referred to me by a very good man, who had been lucky before, and he had not made it a practice to make this prophylactic instillation. And the case was a full-blown gonorrheal ophthalmia when I got hold of it; and, fortunately, the baby is going to have one eye to see out of, but he has got a big corneal ulcer that is going to make him entirely blind out of his other eye.

For the sake of the conservation of vision alone, I think physicians should have this impressed most emphatically upon them, that they must report these cases of venereal disease, particularly these cases of ophthalmia neonatorum. With the knowledge that medical men have, every practitioner in South Dakota should realize that these cases must be reported, and it will bring home to him the fact that he has not been on to his job in the matter of prophylaxis. I mention that as one of the important phases of the control of venereal disease, and I believe we have been altogether too lax about it in the past.

Dr. Craig (Sioux Falls): This is a very unpleasant question, and while I think the remarks of Dr. Parsons are apt, he has possibly diverged somewhat from the real meaning of the subject in question, that of reporting venereal diseases. Of course, it is of the same type, the gonorrheal, but it is not so likely to be communicated except through the negligence of the mother or nurse taking care of the child; and those cases I think will be taken care of by the specialist, and the doctor should

treat them himself better than those hidden cases of gonorrhea and syphilis.

To get right down to the real business: How is the State going to get a line on the number of cases, and make a success of finding out and locating these cases unless it passes some rigid legislation, in regard to the druggists' selling remedies and allowing the patients to treat themselves? I would like very much to know what percentage of these cases treated in this manner become chronic, and communicate the disease for a long time before the doctor ever gets hold of them? That is where the danger lies. Most of the people who get these diseases, would probably consult a physician early in the case, although many of them,—and my own experience proves this,—come to me and say that they had, through the advice of some friend, been to a drug-store and bought some kind of patent medicine, or had a prescription filled which had been given them by a friend; and before the doctor has had a chance to instruct them in regard to the treatment of the disease, they have already done something to make the case a very much more severe one than it would have been had they gone to the doctor in the first place.

I do not see how we are going to control the reporting of these cases and the proper handling of them until we institute some method of doing away with this very popular habit of the druggists and their clerks, or anybody who happens to be in charge of the drug-store at the time, of dispensing and selling remedies for this trouble.

The question of secrecy and the hesitancy of the doctor in reporting the cases, of course, are important, and it is possible for us to receive enlightenment on this subject. I have always thought that when a patient came to me and told me of the disease and also of the fact that he did not want it mentioned to anyone—I am in duty bound not to report it. Many patients, if they know that I must and will report these cases, will, for that reason, go to some other doctor, who they feel possibly will not report their cases.

It is a big question, one that will require a great deal of consideration before it is properly and successfully solved. I know we are working along the right line; but, whether we have the right method yet or not, I do not know, yet I believe that the reporting by case-number only would not help. Dr. Herzberg says it would not help very much. We will have to report them by their name and address, age, and other necessary data.

President Koobs: I had a friend visiting me, who was a doctor and whose home was in Michigan. As we were talking over this regulation that we have recently enacted here in our state, my friend said that they had done this in Michigan some time ago, to report cases in this way by number, but that they soon found out that the law was not a success, and that they now report by name.

Dr. Buffaloe (Mitchell): One feature that has not been touched upon I wish to refer to in this connection. Oftentimes these people come to your office, who have been through the hands of the druggist and from him have secured a prescription which they have carried around in their pocket. And they come to you in this condition. I think a law should be passed which says that the name of the party shall be on the prescription blank, with the number of his residence and the name of his town, and that the druggist shall not be allowed to fill a prescription in which the patient's name and residence are not given, with the name of the physician. That may look a little stringent at first, but when you think it all over and analyze it, it is the thing to do to reach this element which we are discussing.

Dr. Louis Holtz (Aberdeen): I want to see a law enacted by the Federal Government prohibiting any druggist from selling any medicine for the self-cure of gonorrhea and syphilis.

In regard to this reporting of the names of patients suffering from these diseases—the doctors are not going to do it. I have in mind the case of a physician in Aberdeen who does a good deal of genito-urinary work, and I have asked him once or twice why he does not report cases of venereal disease. He said, "Doctor, I cannot report the names of people who come up to me for treatment." He said, "Do you think I am going to report the names of ministers and priests and city officials whom I have under treatment?" That was the answer he gave. He was not going to do it. And if a doctor has as a patient a personal friend or one sent by a personal friend, then he is not going to report that case by name.

To all intents and purposes, we do not care for the name so long as the doctor knows who the patient is, and reports his case by number. Should the patient in question stop taking treatment, it is then that we want to know the name and address of the patient. Up to that time, if the case is treated properly, we do not care to know who the patient is. If patients know that, if their names are to be reported, they are going to get the druggist to treat them somehow or other, or are going to find out through some means how to cure themselves. But I think if only numbers are reported, under these circumstances we shall have accomplished a good deal if we get the co-operation of the physicians.

Dr. McCauley (closing the discussion): We thought that most of the physicians would take the stand Dr. Holtz stated and that they would not report, and we thought that possibly stirring them up to report would be probably the better way.

Answering Dr. Herzberg's query: I do not see any reason why we cannot still insist upon the point when these specimens are sent in. It is not a report to the State Board. I cannot see any reason why you cannot still demand that the name of the patient be given the State Laboratory for the record.

Dr. Herzberg: I do not want the names, but I want you to have the names. I do not care about the names, but I want you to have them. It is almost impossible to file properly by numbers. I do not care anything about the names, but I want you folks to have the names.

Dr. McCauley: In the work contemplated by the War Department, and the laws that we have in the different states, this method was used, and we thought it best to start out with it.

In reference to Dr. Craig's question about the druggists: The regulation requires that any person in attendance upon or applied to for treatment for any case of syphilitic or gonorrheal infection, or a case suspected of being such, is required to report, and the druggist is subject to prosecution for a misdemeanor, the same as the physician would be, if he violates the law.

The United States Public Health Service have said they will send a man into this state, and he will be kept

here as long as needed, to assist in a campaign against venereal diseases. I presume his work will be largely educational with physicians. The Public Health Service will pay part of the expense of this man. Their letter said they would pay from $300 to $1,500 a year, or, in case no other funds are available, possibly more. Just now, if we should get a man here, we should have no way of getting any funds to pay him until July 1, 1919. We would have to wait until the legislature next winter appropriates funds, and they would not be available until July 1, unless it should come out of the deficiency appropriation.

But the Government is taking hold of this thing and insisting that it be put through, and we have simply got to co-operate. The Board of Health is co-operating as far as they know how, and the physicians are going to be forced to co-operate. The Government is taking hold of it, and we have got to do it.

Question: That is a war measure?

Answer: It is a war measure at the present time, but we do not know how long the war will last.

Question: If this is a war measure, there will be no trouble in getting it through the deficiency appropriation.

Answer: It is a war measure. We hope it will be permanent in this state. I think we can get it through the State Council of Defense if in no other way.

A Member: Dr. Holtz asked for an expression from this Association in regard to compulsory vaccination, and I wish before we close that this thing might be taken up and an expression of the opinion of the Association had, because it certainly would be easier for any locality to enforce anything of that character, if the Association expresses itself in that regard.

The President: Have you some resolution to offer?

The Member: I have none. I just wanted to see this matter brought up for consideration.

The President: Offer it in the form of a resolution, and we will consider it.

The Member: I will try to state it as a resolution, that it be the sense of this meeting that compulsory vaccination should be enforced in the State of South Dakota.

Dr. Herzberg: I second that motion.

Dr. Parsons: I expect this resolution to pass, but I want to say that I do not believe this will do us any good. Nobody would be any more pleased to see compulsory vaccination enforced than I. Nobody could appreciate the necessity for compulsory vaccination more than I, but I really think that it will not help very much, and I think at the present stage of the game, before our State Board of Health has gotten developed to the point where they have funds enough to go to work and put this across, and authority to do it—I think we will really make things more difficult than at the present time. I think that the general public understands that all medical men who deserve the standing of reputable physicians approve of compulsory vaccination, but I really do not believe that action of this kind will help very much in getting the opponents of vaccination in any deeper hole than they are in now. I think they will use it as an argument against us, that physicians are inclined to put something over. That is the favorite argument of many.

I do not say this because I am opposed to the resolution, but I am mentioning this as something which I believe is worth considering.

A Member: We are all in favor of this, but I believe at the same time we should be somewhat diplomatic in our course of procedure. If I felt for a minute that this would accomplish anything, I certainly would vote for it, but we have lived through quite an unfortunate experience this spring and winter in Sioux Falls, and we did not accomplish very much, to tell the truth, by our efforts. I believe that when the iron is hot is the time to strike. I do not know that it would do any good at this time when there are so many other questions up and the war is on, and public opinion is not advanced as it should be on this question, I do not believe it would do very much good at this time to pass the resolution. I believe if there was the ghost of a chance of accomplishing any good, we ought to do it, but I do not believe it would have very much weight, and I am opposed at this time to starting anything if we cannot finish it. That is my personal opinion simply.

The President: Our Secretary is not present, but Aberdeen is having a campaign to put this thing over. If they think it is going to help them, let it be done.

Dr. McCauley: Dr. Holtz wants to show the School Board that this thing is being agitated throughout the state, and that the medical profession is all in favor of it. If they go before their Board of Education and say that the State Medical Association is behind this thing, I think it will help. I cannot see that it will do us any harm at all. It possibly might do a little good.

Dr. Parsons: Let this thing get stirred up, and a lot of newspaper men will stir it up still further, and I believe we will be harmed by the agitation. That is the only thing I am afraid of.

The President: Are you ready for the question?

There were calls for the "question."

Dr. Buffaloe: This is a day of specialists, and I would like to go one step further and recommend that every child be vaccinated before it is one year old, and that this Association go on record and urge and advise that no child in South Dakota be allowed to go into a public or private school until it is vaccinated.

I read some time ago one of the reports from Washington, and it occurs to me that I read that eight-tenths of the diseases of our country come from the schools, and the consensus of opinion was that all children should be vaccinated before they were allowed to go into school.

The President: Do you want to offer that as an amendment?

Dr. Buffaloe: I would like to offer it as an amendment, recommending that all children be vaccinated before they are a year old by the health authorities, and that no child be allowed to enter a public school, or any school, in South Dakota, unless it has been vaccinated.

Both the motion and the amendment were lost when put to a vote.

CHONDROMA OF THE THORAX*

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Chondromas may be found fairly often throughout the several portions of the body that contain cartilage or its homologue, but such growths within the thoracic wall are so infrequent as to excite more than ordinary interest. A patient was recently observed in the Mayo Clinic who had a hard tumor in the pleural cavity. The findings were, briefly, as follows:

History.—Case 249,165. A man, aged 61, gave a history of having had an intrathoracic tumor for twenty-five years. The tumor extended downward from its attachment to the first rib to a point well below the fourth rib, and when first noticed was bulging the chest-wall outward at that point. In 1895 Dr. Christian Fenger had removed a small growth from one of the ribs in the region of the axilla, and he reported a benign tumor made up of cartilage and bony tissue. No radiographic record of the case was made at that time. Throughout the years since then, the patient, who is a dentist, had been able to go about his work unembarrassed by the presence of the tumor until one year ago, when movement of the arms caused intercostal pain. This pain, on motion, was augmented by a very tender mass over the juncture of the gladiolus and ziphoid, which had grown noticeably during the past year.

On physical examination the tender areas could be felt along the ribs with several enlargements of bone-like consistency, both in the ribs and in the sternum. The primary tumor was easily mapped out. It filled the area in the right upper thorax, as described, and was of varying degrees of hardness, as evidenced by the varying percussion note on examination. Signs of pressure were manifested by engorged veins, an enlarged right arm, and neuralgic pains. Fluoroscopic examination revealed many small tumors in the ribs and in the sternum; and the large primary tumor, pedunculated and attached to the first rib, could be seen moving with the respiratory excursions. Other findings were negative except that the urine showed the Bence-Jones protein positive. There had been a loss of twenty pounds in weight in the last year.

An exploration was made through an incision over the tumor just below the fold of the pectoralis major. Segments of the hard tumor were removed with a rongeur for microscopic examination, which revealed calcareous necrotic tissue. The large tumor in the pleural sac could have been resected, but such an operation would necessarily have been severe and difficult; but, in the presence of multiple tumors, perhaps secondary growths, which could not be removed, the operation was not thought a wise procedure. The patient was sent to his home with instructions to take Coolidge-tube treatments. The probability of malignancy, even if inconclusive, is very strong.

Discussion.—It could not be determined whether or not the rib and sternal tumors were secondaries, but their recent growth, and their pressure on the nerves, with the consequent neuralgia would give credence to that assumption, as would also the fact that the patient had lost twenty pounds in weight, and had the Bence-Jones protein in the urine. This last finding is, however, of rather doubtful significance, since its value as a test for malignancy is not established, although it is known to be one of the early findings in cases of myeloma. Because of the size of the mass it is presumable that it would show degenerative changes at the central zones,—for example, those farthest removed from the source of nutrition. It might be mentioned that this patient had sustained an injury to the chest forty years before. That such intrathoracic tumors occur but rarely is evidenced by the fact that this is the only case observed in the routine examination of 250,000 cases in the Mayo Clinic.

Busse, in 1907, reported a case of a tumor of the pleura, and mentioned those described by Schultze, von Reissig, Lesser, Turner, and others. In Schultze's case, in a man 69 years of age, the tumor was found in the pleura. It was kidney-shaped and lay in a sac composed of visceral pleura. Secondary cartilaginous pea-shaped bodies had formed in the apex of the lung. In von Reissig's case the tumor was smaller, the size of a cherry; and it likewise was found in the visceral pleura, and contained connective tissue, adipose tissue, and also true bone tissue. It was believed that the tumor had developed from the endothelium itself. In the case described by Lesser the tumor was 15 by 5.5 by 2.5

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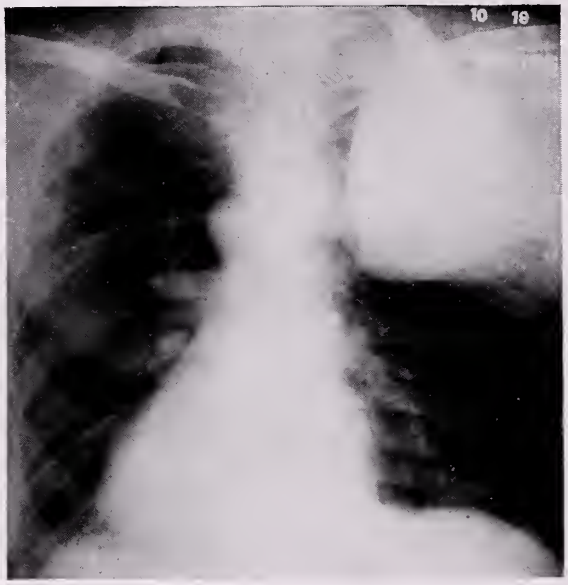

Fig. 1 (249165.) Chondroma of the thorax.

cm. in size, and was found in the lower lobe of the left lung. It contained cartilage and true bone with Haversian canals. In Turner's case the tumor had developed from the sternum, a fairly common site; thence had grown into the chest-cavity, pushing the heart to the right and compressing the left lung in its development. It showed the well-recognized tendency toward degeneration in its interior, the degenerated tissue being replaced by calcareous deposit.

Parham, in 1899, collected the literature of 78 cases of chondroma of the chest, and described tumors that had developed in the ribs and sternum and had pushed their way into the thoracic cavity. In his report, quoting Weber and Schlapfer's 260 cases, he stated that 3 per cent of chrondromas or osteochondromas develop primarily in the rib.

Adami has classified chondromas as *hylic* or *pulp* tumors of mesenchymal origin, and typical in character because they resemble in structure the tissues from which they develop. White places them among the histiomas or tissue tumors. They may be single or multiple, and are usually globular in shape surrounded by a fibrous capsule, the result of long-continued pressure on the surrounding tissues. Such tumors do not infiltrate, unless they become atypical or sarcomatous. Most of the growths described as chondromas or ecchondromas are really not isolated tumors growing independently of the mother tissue, and should properly be classified, as Adami suggests, under the head of ecchondromas or chondromatoid growths. True ecchondromas are found lying free and encapsulated in the long bones, salivary glands, and the glands of reproduction. There may be some doubt regarding these so-called mixed tumors of the testes and of the parotid, because they have been found to be derived from all three primary germinal layers and are not alone mesenchymal in origin. Kettle, in this connection, mentions the often quoted tumor of Paget, which was later proved by Nicholson to be a teratoma. Kettle makes the observation that "With this example before us we should, I think, regard with some suspicion the formation of metastases by a simple chondroma."

The ecchondromas are derived from regions in which cartilage exists, and are found in the ribs, in the larynx, in the trachea, and in the intervertebral discs. A number of such laryngeal and tracheal tumors have been observed in the Mayo clinic by New. The chondromatoid tumors are usually lobulated, the lobules being separated by bands of connective tissue, which carry the blood vessels and lymphatics into the interior of the developing growth in which there are to be found few vessels or none at all. Because of this separation of the interior of such tumors from their supply base, degeneration is likely to take place, and thus it is that at the central areas degenerating processes pass through all the types from mucoid, or myxomatous to calcareous or even to true bone formation, as in Lesser's and Turner's cases. In the last type, bone-like masses are more often found than true bone, although in the case herein reported a tissue bearing true bone cells and Haversian canals was demonstrated. (Fig. 1.)

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TUBERCULOSIS OF THE EYE

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Ocular tuberculosis is a comparatively rare condition, constituting not more than one out of every eight hundred eye cases treated in American dispensaries. It is much more frequently met with in European clinics.

Probably no other eye disease exhibits more atypical forms; and for this reason its recognition is sometimes quite difficult, necessitating the employment of all the diagnostic expedients at our command in order to establish a diagnosis beyond question.

Tuberculosis of the eye is essentially a disease of childhood and early adult life, and rarely begins after the twentieth year. One is impressed with the frequence with which it is encountered in young people who are well nourished, are of normal weight or above, and present every appearance of robust health. The history, however, will often bring out the fact that these patients tire quickly, after even mild exertion, and are generally lacking in physical stamina. Tuberculosis of the eye may manifest itself as a primary or a secondary process, and may pursue an acute course or a chronic one.

The lesions exhibit the same general characteristics as those in other parts of the body, being modified only by the peculiar character of the tissues involved.

Tubercular infection of the ocular tissues occurs in one of three ways:

1. By direct infection from without by the tubercle bacillus.
2. By extension from contiguous structures.
3. By metastasis through the blood- or lymph-stream.

Lauber, in his clinical lectures, Pearson, and others have called attention to the important rôle of the lymphatic system in tuberculosis involving the eye. Study of the lymphatic channels anterior and posterior to the tarsus, the perivascular lymph spaces of His, with their communications about the lamina cribrosa into clefts in the optic nerve, the intercommunicating lymph spaces of the sclera, etc., makes clear the source and explains the distribution of many of these lesions.

Tuberculosis of the Eye-Lids.—Tuberculosis involving the skin of the lids does not differ from cutaneous tuberculosis elsewhere in the body.

Lupus vulgaris is the form most frequently encountered, and is due to a primary invasion from without by the bacillus tuberculosis or to extension by contiguity from a facial lupus. Pathologically, it is a granuloma characterized by definite tubercles and usually terminating in ulceration. It makes its appearance in the form of small, hard, brownish-red nodules, which spread very slowly and ultimately break down, forming shallow, irregular ulcers with overhanging edges and a tendency to crust-formation. It may be, and usually is, months before the lesions show any tendency to heal. When cicatrization begins it is the center which commences to heal, and the ulceration is at the edge of the advancing lesion. The scar tissue is soft and atrophic, and is not immune to re-infection. The lesions may remain stationary for months or years, and then suddenly commence to progress.

Diagnosis.—The diagnosis is not difficult, except in the very early stages. It is differentiated from syphilis by the fact that the latter spreads much more rapidly, and the ulcers are clean-cut and have a punched-out appearance quite different from those of lupus. Syphilis is uncommon at the early age at which lupus is encountered, and the history, systemic examination, Wassermann test, and examination of excised tissue, should clear up the diagnosis in doubtful, atypical cases.

Prognosis—The prognosis is bad. Lupus vulgaris is a chronic disease and one that is extremely resistant to treatment. The lids may be extensively destroyed by the process; and, apart from the disfigurement, the shrinking of the scar tissue produces distortions of the lids of a type difficult to handle and often with baneful ultimate effects on the eyeball and the vision.

Treatment.—The treatment is best entrusted to the dermatologist. The condition is usually associated with lupus of the face, and is not, as a rule, brought to the oculist's attention until complications involving the eyeball have appeared.

Scrofuloderma is less common than lupus, and gives rise to hard nodules in the lids, resembling chalazia, which usually eventually perforate the lid externally. Some of these cases arise where there is no apparent pathology of the adjacent

lymph-glands, and probably originate from the subcutaneous lymph-nodes.

Other forms of skin tuberculosis are extremely rare.

Tuberculosis of the Conjunctiva.—Tuberculous of the conjunctiva is met with in three forms:

1. The acute miliary or nodular form.
2. The ulcerative type. (Usually chronic.)
3. The diffuse or vegetating variety.

The acute miliary form pursues a rapid course, and very often involves the tarsal covering. It is usually unilateral, and appears in the form of small, reddish, indurated nodules, which evince the typical tendency to caseate and form ulcers. There is early involvement of the pre-auricular glands.

The ulcerative form usually progresses slowly. The ulcers are yellowish and dirty-looking, with soft, ragged edges. Yellowish-gray tubercles are often seen along the advancing edge.

The diffuse, or vegetating, form is quite uncommon, and, like the others, is usually unilateral. There is a diffuse infiltration and swelling of the conjunctiva with enlargement of the follicles. The lymphoid proliferation is sometimes quite marked, and the condition often bears a superficial resemblance to trachoma.

(Phlyctenular conjunctivitis is sometimes classed as a form of tubercular conjunctivitis, but I do not believe that our present knowledge of this condition warrants the assumption that it is a tubercular process. Histologically, the phlyctenule bears no resemblance to a tubercular lesion, and seldom, if ever, contains tubercle bacilli. The fact that many children with phlyctenular conjunctivitis give a positive reaction to tuberculin is of no great significance.)

Like the cutaneous form, conjunctival tuberculosis may be the result of direct infection from without—of extension from contiguous structures or of systemic infection through the blood or the lymph-stream. It is not probable that infection with the tubercle bacillus can take place through the intact conjunctiva (or skin), and an abrasion from traumatism or a foreign body is probably prerequisite. It resembles skin tuberculosis in that the process may remain stationary for months, or even evince a tendency to heal under treatment, when the disease will suddenly light up and progress rapidly to a disastrous termination.

There is often a surprising absence or mildness of subjective symptoms. Even in advanced cases the patients frequently complain of nothing beyond a sensation of a foreign body, with some lachrymation, swelling of the lids, and a slight mucopurulent discharge. In all forms of conjunctival tuberculosis, enlargement of the neighboring lymphatic glands, pre-auricular, submaxillary and cervical, is an early and constant symptom.

Diagnosis.—Although it is a departure from the conventional conception, I would regard the study of the diurnal temperature range as the most important factor in the differential diagnosis of ocular tuberculosis. It is of pre-eminent importance because it furnishes valuable information in the early stages of the disease—the time when differentiation is difficult, and the time when the ability to differentiate is of greatest value. The diurnal-temperature curve is that typical of tuberculosis with the especially significant subnormal variations, *and it is not met with in other conditions.*

The condition most likely to be confused with tubercular conjunctivitis is syphilis. Lues, for the most part, is met with at a later age, and is very much more rapid in its course. As soon as ulceration occurs the differentiation is easy: in the early stages the positive Wassermann reaction, the negative tuberculin test, and the absence of a typical diurnal temperature range will give sufficient information without the necessity of examining sections of excised tissue.

The resemblance of chronic tubercular ulcers of the conjunctiva to epithelioma is only superficial.

The possibility of tuberculosis and syphilis coexisting must, of course, be kept in mind, as must the occasional tendency of lupus scars to undergo malignant degeneration.

Treatment.—In the discussion of the treatment of any of the local manifestations of tuberculosis it must be assumed that all of the established general measures (rest, fresh air, adequate nourishment, etc.) have been instituted, for, otherwise, local treatment could not be expected to have much effect. The local treatment of conjunctival tuberculosis consists in the thorough excision of the diseased area when this can be done without disfigurement or impairment of function, cauterization, and the local application of iodoform in powder or ointment. Lactic-acid application, 50 per cent to full strength (with precautions to guard the cornea), carbon-dioxide snow, and the employment of focused sunlight on the lesions have been recommended. The use of tuberculin

as a diagnostic and therapeutic measure will be discussed later.

Corneal Tuberculosis.—Tuberculosis involving the cornea is very rare. It assumes different forms, and usually is the result of an extension from a diseased conjunctiva. In the superficial or "pannus" type, small, grayish-yellow nodules form on the vascularized cornea. They gradually coalesce, and later form ulcers. The chronic ulcerative type is analogous to chronic ulcerative conjunctivitis. The ulcers are indolent and unusually resistant to treatment, and are associated with proliferating marginal granulations. There is also a deep or infiltrated keratitis, which is a sequel of tuberculosis of the uveal tract, and resembles syphilitic interstitial keratitis. The prognosis is, however, not so good as that in the luetic variety, since the latter is more amenable to treatment, and, under favorable circumstances, clears up without leaving any opacities of consequence, which the tubercular form never does. The only conditions with which tubercular keratitis would be likely to be confused are lues and trachoma, and the resemblance to these is only superficial.

Apart from the general measures and the specific therapy (tuberculin), the treatment is that of keratitis in general.

Tuberculosis of the Sclera.—Scleritis, or episcleritis, may be the only discoverable manifestation of tuberculosis in the eye. Probably a larger percentage of the cases of scleritis (especially of the nodular variety) have been tubercular than we have supposed.

Tuberculosis of the Uveal Tract.—Tuberculous iritis is almost a secondary disease and is usually much milder in its manifestations than iritis due to other causes. A number of varieties have been described, but a division into three groups is sufficient:

1. Granuloma, or solitary tubercle. This form is almost always unilateral, and can almost be classed as a new growth. It is most common in young children. The extent of the gross changes in the iris are in striking contrast with the mildness of the symptoms.

2. Small, Disseminated Nodular Tubercles of the Iris. These occur characteristically in the outer (ciliary) half or two-thirds of the iris. In following a case over a period of time, variations in the size and shape of the lesions can be observed. The grayish-yellow color and the distribution of the lesions distinguish them from syphilitic nodules, which latter are situated either on the ciliary or pupillary border of the iris, but never in the mid-breadths where the tuberculous nodules are formed.

3. Diffuse iritis with adhesions. This form is characterized by a diffuse thickening of the iris and stroma, and a marked tendency to the formation of adhesions. Seclusion or occlusion of the pupil is sometimes a sequel, and may give rise to a secondary glaucoma.

Tubercular Chorioiditis.—Chorioiditis may occur as a sequel of any form of systemic tuberculosis. It is the most frequent form of intra-ocular tuberculosis. As has been said before, a study of the nature and distribution of the ocular lymphatics will explain its relative frequency and the characteristic localizations of the lesions. With the ophthalmoscope it appears, first, as multiple, ill-defined patches of a yellowish color in the neighborhood of the papilla. The rapidity with which these patches often spread, and the absence or extreme scantiness of pigment-proliferation are characteristic. Definite tubercles are sometimes observed. The relation of the perivascular lymph-spaces of His to the chorioidal vessels, explains the changes in the vessel walls and the hemorrhages encountered in the diffuse chorioiditis in tubercular children. Conglomerate tubercle of the chorioid, like that of the iris, may strongly resemble a neoplasm. Tuberculous pseudoglioma of the chorioid is a rare condition, which clinically resembles true glioma. Pseudoglioma is usually associated with decreased intra-ocular tension, instead of the increased tension characteristic of true glioma, and often leads to a phthisis bulbi.

Tuberculosis of the Retina.—Tuberculosis involving the retina may be due to metastasis from a tubercular focus in some remote organ of the body or to extension from a tubercular iridocyclitis or chorioiditis. The predominant symptom of tubercular retinitis, and usually the first to be observed, is hemorrhage from the retinal vessels. The hemorrhages are usually multiple and may be very small or extensive enough to fill the entire vitreous chamber. It is by far the most frequent cause of intra-ocular bleeding in young patients.

Tuberculosis of the Optic Nerve.—This is an extremely rare condition; only a few cases of it have been reported. The extension of infection from a tubercular meningitis to the optic nerve and uveal tract, has been mentioned.

As has been said before, probably no other disease of the eye shows more atypical forms than tuberculosis. For this reason it is necessary to employ all the diagnostic expedients at our

command, in order to establish a diagnosis in doubtful cases. Clinical appearance, examination of excised tissue, experimental inoculation, and biological reactions are all factors in arriving at a diagnosis, and observation of the temperature-curve is of extreme importance.

In regard to the treatment of ocular tuberculosis in general: It may be said that all clinicians are agreed that it is important to treat the patient as a whole rather than the local process. There is also not very much diversity of opinion in regard to the efficacy—or lack of it—of the various local remedies. There is not, however, such unanimity of opinion in regard to the use of tuberculin as a diagnostic and therapeutic measure.

Reaction following the diagnostic use of tuberculin is of three kinds—general, focal, and local. The general reaction shows itself as a general malaise, fever, and headache, with sometimes a skin eruption and nausea. The local reaction consists in an inflamed nodule or infiltration at the site of injection, and sometimes an adenitis. The focal reaction is just an increased inflammatory reaction in the tuberculous lesion under observation. The older the patient the less the significance of a positive reaction. After the twentieth year, so many people give a positive reaction to tuberculin that its diagnostic value is much reduced. As a therapeutic agent tuberculin is of distinct value when used carefully and conservatively and with due regard for possible idiosyncrasies on the part of the patient. The initial dose (either of BE or TR) should be one five-thousandth mgr. or less, gradually increasing it at intervals of about a week until one or two milligrams are given. Excessive reactions are to be carefully avoided. The efficacy of tuberculin treatment is most evident in cases of tuberculous iritis. Chorioiditis responds fairly well, and conjunctival lesions seem, in the experiences of the writer, to be influenced little, if at all.

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HOSPITAL DEPARTMENT

Conducted by G. W. Olson
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HOSPITAL LEGISLATION IN MINNESOTA

The above heading is a misnomer: there is no such thing. The able address of Mr. Grimes, delivered at the Minnesota Hospital Conference last June, printed below, brings out some of the advantages which have accrued to the hospitals from constitutional provisions enacted mainly in the interest of churches and schools, orphanages and asylums. But these were probably never intended to benefit hospitals of the character we have today.

Hospitals organized without capital stock and not operating for profit are classed as charitable institutions, and therefore exempted from general taxation. Many hospital managers will agree that it would be better to be taxed like any other enterprise, so that the hospital could, with good grace, exact justice from those whom it serves, and be privileged to dispense charity where it is needed, but not obligated to extend charity to all, as is now the case in most hospitals which charge less than cost for their service to the great majority of patients.

There is absolutely no legislation on the statute books of Minnesota that is designed to be especially helpful to the general hospitals; instead, there are laws that are designed to rob and impoverish them. Witness the Workmen's Compensation Act. The framers of that law deliberately intended to deprive the hospitals and doctors of their rightful compensation for their services. How otherwise can we explain an act that places an absolute limit of two hundred dollars on the value or cost of the medical service that may be needed by an injured human being? The writer has records of cases where men have been so severely injured that they have been confined to bed in hospitals for one year; yes, in one case for two years and a half. Why, two hundreds dollars would not pay for the linen and

laundry service in such a case. The amount contributed by the hospitals, physicians, and nurses in Minnesota for the relief of persons injured in industrial employment runs into thousands of dollars annually. The theory of the law is that the industry shall bear the burden of injuries sustained by the worker. Good; but under our present law this burden is largely shifted upon the skilled hands of the medical profession and the weak but willing arms of the hospitals and nurses. We know of cases where physicians have worked with patients of this kind for months, and wrought wonderful results, but have not received a penny for their work. In these same cases the hospital has been obliged to contribute room, board, and care to the value of hundreds of dollars; and trained nurses, dependent upon their professional earnings for their livelihood, have had to give weeks of service without pay, because the maximum of two hundred dollars would not compensate the two of them on the case for more than four weeks. And the industry that was supposed, under the law, to carry this burden, went right on disbursing dividends and bonuses to its stockholders, unconcerned about the sacrifices of the ministering angels at the bedside of their injured worker. It is laws like this that make "Bolshevists" out of sane men. In extenuation of this injustice, lawmakers tell us that hospitals enjoy freedom from taxation! But do doctors and nurses enjoy any such privilege? And they are often the first to lose, because they know that, unless the hospital gets paid, it can not run, and then there will be no place to which the sick can go for care, and no place where nurses can be trained. And even the capitalistic industrial employer will admit that we need nurses.

The Minnesota Workmen's Compensation Act must be amended by the present legislature, and it will be amended if the hospitals, doctors, and nurses in the state take an interest in the matter and talk with or write to their respective senators and representatives. This is a matter in which professional modesty must not be allowed to retard action.

The effort to amend the law relating to frauds on innkeepers so as to extend the same protection to hospitals and sanitariums, will be renewed at the present session of the Minnesota legislature. There was no opposition to this amendment at the previous session, but it was introduced too late to come to a vote. It is to be hoped that it will be passed at this session without opposition. Surely the modern general hospital, in every way equal to any hotel in housing and culinary service, to say nothing of the nursing and medical or surgical treatment furnished its guests, is entitled to as much protection against fraud as is accorded by law to any boarding-house or lodging-house. It is only in one case in a hundred, perhaps, that such a law would be invoked by the hospital; but that hundredth case may mean the dividing line between self-support and deficit, between progress and retrogression in the career of the hospital.

G. W. O.

THE HOSPITALS AND THE LAW: EXTENT OF PRIVILEGES AND PROTECTION GRANTED TO GENERAL HOSPITALS BY THE LAWS OF MINNESOTA*

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Attorney-Trustee of St. Barnabas Hospital, Minneapolis.

Hospitals, from a legal standpoint, may be divided into two classes: those that are organized without profit or a view to profit, designated as charitable institutions; and those that are organized with a view to profit. Both classes are provided for by the statutes of the state of Minnesota. Hospitals may be organized as charitable institutions. In that case they have no capital stock. None of the property, income, donations, or bequests to such an institution can be diverted from the purpose for which the institution is organized, namely, the care of the sick and needy. Hospitals may be organized under the laws of the state with capital stock, the same as any other business may be organized; and individuals, of course, may own and operate hospitals the same as a corporation which is organized with capital stock, but the law looks at those two classes of hospitals in a different way in some respects.

In the first place, hospitals that are organized as charitable institutions are determined as such by the fact as to whether the corporation has capital stock, whether its property, income, profits, or such like, may be diverted to any other purpose than that for which the hospital is organized. Hospitals that are charitable institutions are exempt from taxation under the constitution and laws of the State, that is, taxation

*Presented at the First Annual Conference of the Minnesota Hospital Association, Minneapolis, June 27 and 28, 1918.

for general purposes. They are subject to taxation for what are known as street improvements and betterments, such as sidewalks, curb and gutter, pavement, sewer, water mains, park acquisitions and improvements, and such like, which are supposed to enhance the value of the property to which they are appurtenant. There have been many efforts to bring this class of institutions within the taxing power of the State, but that has been a very difficult thing to do—practically impossible—from the fact that that law is embodied in the fundamental law of the State, the constitution; and we all know how difficult it is, under present arrangements, to amend the constitution of the State.

There is another way in which hospitals of the first-named class, charitable institutions, are favored by the law. Prior to the passage of the Workmen's Compensation Act charitable hospitals were not liable for the negligence of the officers or employes of the hospital. This is not a matter of statute law, but is a part of common law, and wherever a case of this kind has been passed upon by any of the State courts or the Federal courts in the United States, charitable institutions have been held to be exempt from liability for negligence of employes or officers—everywhere, I believe, except in Rhode Island, and we may expect most any kind of a decision from the State of Rhode Island. A friend of mine the other day was bewailing the fact that of all the States that had voted upon the proposed amendment to the constitution of the United States prohibiting the manufacture and sale of intoxicating liquors, the State of Rhode Island was the only State that failed to vote in favor of the amendment. There is nothing remarkable about that, because Rhode Island has never yet adopted the constitution of the United States.

This rule of law exempting charitable institutions from what is known as personal-injury suits (damage suits) arose in England several centuries ago, and it was a policy adopted by the courts. It has never had any standing on the statute books that I am aware of. The basis of it is that these charitable organizations, and the foundations left to those institutions for the purpose of charity, ought not to be subject to impairment by personal-injury suits growing out of the negligence of the employes. Of course, hospitals that are organized with capital stock have not this privilege: they stand upon the same footing as any business corporation engaged in any business enterprise or venture.

The Workmen's Compensation Act, passed some years ago, put all employers of labor under the provisions of that act, so that hospitals organized as charitable institutions are now subject to the provisions of that law; and, when an employe of a charitable institution is injured, that person is entitled to compensation upon the same basis as an employe of any corporation or any individual. But the exemption of charitable hospitals from liability for negligence to patients or to visitors on the hospital premises still obtains.

From the fact that this class of hospitals is organized in this way, without any object of making money in view, and with these legal privileges, you can readily see how difficult it must be for anybody to engage in the hospital business as a money-making venture. If you know of anybody who contemplates anything of that kind, you better advise him to keep out of it, not only for the reason that the charitable hospital is favored by the law through these exemptions, but there is always a tendency on the part of hospitals that are organized for the purposes of charity to base their rates, not upon a money-making basis, but upon a basis of meeting only the actual operating expenses; and a hospital that undertakes to compete with this class of hospitals will be, if I may use the expression, up against it.

I referred to the Workmen's Compensation Act. There are two bad features about that, it seems to me, as related to the hospitals. In the first place, the maximum allowance that is made under that act for hospital bills, nurses' fees, and physician and surgeon, all combined, is two hundred dollars, an amount that in cases of serious injury is wholly inadequate, in fact, almost nominal. It seems to me that there ought to be a graded scale of compensation along that line, the same as there is in other ways under this Workmen's Compensation Act. For instance, there are a graded scale of compensation according to the seriousness of the injury, the quantum of the disability, whether total or partial; and also another graded scale based upon the wages of the employe. But there is set down this arbitrary amount of one hundred dollars (upon application to the court it may be increased to a maximum of two hundred dollars), to compensate the employe for services of a physician and surgeon, nursing, and hospital expenses. I

have a case in mind now where these bills, which fell upon the family, who were unable to pay them, amounted to over a thousand dollars.

There is a second feature in that act, so far as hospitals are concerned, which, it seems to me, needs attention—I think it would be a good thing if the hospitals of the state gave it some serious consideration with a view to amending that law—and that is this, that the employer under the Compensation Act has the absolute right to determine, not only the physician that shall be employed, but the hospital that shall be selected. If, as happens in a great many cases, the employer does not do anything in the matter—does not designate either a hospital or a physician—and the injured employe sets out on his own account to select a hospital or physician, he cannot recover anything under the Compensation Act. In other words, he must pay for what he himself has ordered, and it is only in case the employer has ordered the services of a physician or surgeon, or the hospital, that there can be any recovery under the Workmen's Compensation Act.

A hospital in one sense is a hotel; that is, it provides food and lodging for the patient. The only distinguishing feature from a hotel is that the guest of the hospital is sick and the guest of the hotel is well, at least when he goes there. The hotel has a lien upon any baggage that the guest may bring there, and, in addition to that, when the guest comes to the hotel, unless he makes some positive arrangement for a credit, if he goes away and does not pay his bill he is criminally liable. He is liable to prosecution and confinement in the county jail or the workhouse, and he is usually followed up pretty rapidly in case he does attempt to beat his bill. He is liable to get a jail sentence. That is, where he has undertaken to get free board and lodging in the hotel, he is penalized by being furnished additional free board and lodging, but at the expense of the State rather than the hotel-keeper. Now, the hospital has no such leverage as that upon its patient to collect its bill, has no lien of any kind upon his baggage or property unless by express contract between the hospital and the patient. He may go when he pleases, pay if he pleases, and he is subject to no embarrassments from a legal standpoint, so far as prosecution is concerned. A bill has been introduced, I understand, and some effort made to have the so-called innkeepers' law applied to hospitals and sanitariums, but I believe, as yet, without success. I do not know how that law would work out as applied to these charitable institutions. I imagine there would be a good deal of difficulty about enforcing the criminal phase of it. If a man goes to a hotel, says nothing about credit, and leaves without paying his bill, the presumption is that he intended to defraud the hotel owner, and such action alone would sustain a conviction in the courts; but, I believe, it would be a difficult matter to secure the conviction of a patient who left the hospital without paying his bill, because he comes there under different circumstances. He is looked upon as an unfortunate, in the first place. In the second place, he may come there having money enough to pay, and intending to pay for the period he stays, but on account of the illness being protracted beyond the time he expected, his funds give out. I think it would be difficult to enforce a law of that kind, particularly as applied to charitable hospitals.

There is another legal question that affects hospitals. No doubt you who have to do with the administration of hospitals have met with it frequently. I have spoken about the difficulty of obtaining pay for pay-patients. Having no lien, no restraint upon the person himself or his effects, you cannot hold him for his obligation, he can go when he pleases; but the hospital often gets money and property that it is just as difficult to let go of. In the case of a patient who has left money, jewelry, or other property with a hospital and dies there, it is a conundrum sometimes to know what to do with that property. The only safe thing to do is to hold it until an administrator of the deceased is appointed, and then turn over the property to the administrator, requiring him to present a certified copy of the letters of administration. You will always be safe in that case. But in nine cases out of ten some relative will be there to ask for and demand that property. It is not safe in any case, hardly, to turn it over to such claimant, because the creditors of the estate have the first call upon the property and assets of the estate, after taking out certain exemptions and preferred claims; and this very property may be required for just that purpose. If the hospital turns it over to some relative or some person who is not legally authorized to receive it, the hospital may have to account for it and pay the value of it again.

There is another legal difficulty in the financial administration of hospitals. It is often desirable and necessary, if the hospital is going to be managed successfully, to require a guarantee for the

patient's care in the hospital if that patient is unable to pay and still cannot be taken as a charity case. A guarantee of another's bill in the hospital, if made before the service is rendered, is good even if made only by word of mouth; but that guarantee, an oral guarantee, after the service is rendered, is of no account and has no legal standing whatever. It must in that case be in writing, and not only in writing, but it must express a consideration for that guarantee. The safe thing to do in cases of that kind is to take the written guarantee of the responsible party at the time, or prior to the time, the patient is admitted to the hospital. Efforts may be made to terminate that guarantee. I presume some of you have met that proposition face to face. Before the Workmen's Compensation Act went into effect more than now, it used to happen that in case of an accident the employer or someone would rush the injured person to the hospital, and undertake to pay for his care and keep there. Later, perhaps while still in the hospital, the patient may have come in contact with a lawyer or damage-suit bureau, and started or threatened to start suit against the employer or the person or firm alleged to be liable for the injuries. The guarantor has then sought to terminate his liability, leaving the patient upon the hands of the hospital. I have in mind a flagrant case of that kind in a local hospital some years ago. An employer brought in an injured employe. One of the officers of the employing corporation said that they would pay for the care of the patient. About a week afterwards they served notice on the hospital that they would no longer be responsible for the care and keep of that patient. The hospital had to keep the patient, as he was in no shape to be moved or transferred. He had no money himself to pay his bill. The hospital kept him for a period of four or five months, and presented the bill to the corporation that had sent him there. They laughed at it. Suit was brought upon that bill, and a verdict obtained that was sustained by the supreme court of this State, which held that a person could not take another to a hospital and guarantee his care there, although there was no time or amount specified, and then terminate that liability and leave the patient on the hands of the hospital. The decision was in accordance with humane principles and good law.

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THE JOYS OF STATISTICS

FIGURES NEVER LIE

In January, 1910, there were, in the United States, 62,683 single men insane and 26,047 married men insane—which shows that the crazy men stay single. At the same time there were 37,115 single women insane and 35,975 married women insane—which proves that in January, 1910, married life made more women crazy than it did men. And the more you study these figures the crazier it makes you.

The above clipping from the *Journal of the American Medical Association* for January 18, 1919, is quite suggestive and impressive of what statistics may do, and is quite in line with what has already been said by many people at many times. It recalls the old debate between two surgeons, one of whom read a paper, in which he stated that he had cured by surgery a considerable number of cancers. When the second surgeon arose to discuss the problem, he said that his findings were rather different,—that most of his patients had died. The reader of the paper retorted that he had the statistics, and that figures do not lie; the other man responded by saying he knew very well figures may not lie, but sometimes they grew "damned enthusiastic." So it is with many other statistical publications, and it has recently been particularly noticeable in the statistics given out as to the value of influenza and pneumonia vaccines. If one read all the literature on the subject and all of the statistics pertaining to both of the vaccines, there is no question but what a very large doubt would exist in the mind of the student.

The conclusions which the medical statistician draws from his own figures are not often convincing, for the reason that there is almost invariably a lack of control of the large number of patients which pass before the statistician's eye. When the average man sees a medical journal or a newspaper filled with pages of figures, from which deductions are drawn, he passes over the details unless his mind is bent on statistics. It is not very enlightening or convincing to know that a certain number of people, that is, a certain percentage out of one thousand observed, make very remarkable recoveries, particularly before time enough has elapsed to prove the conclusions arrived at by the too ready statistical writer. Of course, there may be some things which are very informing, and from which we may draw certain deductions; but, as a rule, the statistics of the present epidemic are too fresh and the deductions too juvenile, and, yet, from now on the country will be flooded with influenza statistics of all kinds.

Such statistics will be applied to the results of the great war. They are compiled by individuals who have certain determined views that bias their ultimate conclusions, and it will probably be fifty years before anything in the way of reliable warfare statistics can be definitely settled; and, yet, there are writers who already have shown what they believe to be correct estimates of the number of dead, wounded, imprisoned, and recovered. Statistics ought also to apply to the efforts of medical men, who seem to have a special center in their brains for this lively and joyous form of amusement; and yet, when all data are analyzed, particularly when they are gathered in a haphazard method, and made before the patients have had time to recover, they are almost entirely worthless. It is quite true that in some instances, where sufficient time has elapsed, years probably, when there is a certain definite result attained, the data may be of value; but these are the exceptions, and not the rule, of statistics.

It is also impossible, from the personal-equasion point of view, to put two statisticians in the same class, because every man differs from every other in some of his hereditary tendencies, his life, his environment, and everything that goes to make up the individual. Statistics applied even to industrial efforts, where activities are great, show widely different end-results, just as they do in medicine, or war, or other great "activities of life."

Our conclusions are that statistics, as a rule, are

not of much value, unless they are backed by concerted action on the part of individuals who are impersonal and unbiased in their efforts to find the truth. In the meantime we may occasionally cull from the statistical literature something of real value, but for the most part the fashion in statistics changes as often as a woman's hat, and the woman who wears a 1918 hat in 1919 is quite conscious that things have changed during that year; but the statistician never changes his methods or his style,—he hammers away in the same lugubrious fashion, piling figures upon figures with the vain hope that someone will wade through them and read to the bitter end.

THE ALL-THE-YEAR-ROUND SCHOOL PLAN

Minneapolis and St. Paul (we include the two cities, because they are very close together and more or less harmonious in new fads) are in the throes of excitement over the all-year-round school proposition; and we are confronted daily in the public press with the arguments, pro and con, to prove or disprove the value of the plan.

The educational system, as a whole, is bad enough, as every thinking man knows, and to add to it a longer period of time is begging the question of the value of education. For years, perhaps for a hundred years, the same old methods, sometimes clothed anew, have been handed down to us as the proper and only legitimate educational methods; and those who observe the problems which confront the Board of Education (composed of men selected largely at random, and ever changing) must see the unfavorable side, the unfortunate side, of our school methods. It has been proven, time and again, that children are massed in schools and all given much the same character of work, without regard to the individual child, his adaptability, his physical condition, or his mental state. Pupils who lag behind, because they are slow thinkers, are looked upon as shirkers, and those who forge ahead are assumed to be brilliant; but the time comes when the forced system of education ultimately brings out the true physical and mental characteristics of the child. The result is that under pressure children break down at the age of puberty, or in young adolescence, simply because they have been forced beyond their normal limitations; and this occurs in spite of the fact that nurses and school physicians are on the ground to watch for communicable diseases, large tonsils, bad teeth, obstructed nasal passages, and a few other inherent defects; but the writer believes that he can safely assert that the average school doctor does not give much consideration to the nervous or mental side of the child, and therefore a large number of deficient young people, crammed and crowded with school work, unable to withstand the onslaughts of an imperfect system of education, very soon show that there is something wrong with the entire educational organization.

Very little is said about the numberless methods of different educators and the changes in them from year to year, because some man or woman suddenly develops what he supposes to be a new idea; and again the child is hampered and abused by something that distorts his mind and renders him incapable of digesting or assimilating the studies which he is forced to pursue. This method is not limited to the public schools any more than to the universities and colleges. A part of this is due perhaps to the lack of the control of the child and his welfare; a part is due to the inability of the teacher to regulate the out-of-school life of the individual; and a large part of it is due to poor home training.

It has been noted, too, that teachers are very much overworked, particularly with the red-tape methods, which are so much in vogue, and which are made difficult and not easy. When the teacher gets tired her condition reflects upon the pupil. The pupils soon become able to recognize the inequalities of instruction, the lack of co-ordination in various subjects, and the lack of discrimination between methods that were looked upon years ago as adequate and now are found to be inadequate. And when a tired teacher reaches her tired period she is apt to be irritable and fault-finding, and this in turn reacts upon the pupil; hence, both teacher and pupil become depressed,—the teacher goes home from a hard day's work with the idea that little has been accomplished; and the child goes home with a condition that is difficult to relieve.

Now, coming to the point suggested by the title of this editorial, the all-year-round school plan apparently is to be forced upon the schools of the Twin Cities, largely because in one or two cities of fair size and in a few schools the plan has apparently worked well, and in order to relieve a few congested districts. Of course, to the ordinary layman, and perhaps to the physician, this method is more like a fad, one of the

numerous school fads that crop out almost every year; and yet we are told by the educators that this is the only system, while we as physicians know that the only system which is productive of good results is to teach the individual child how to think and act, and eventually to learn something.

Many parents are willing that the schools should remain open for twelve months, in order to keep their children out of mischief, and in order to relieve them of some of the responsibilities that belong to them.

The arguments in favor of the all-year-round school system have been presented in from fourteen to twenty-one points, all of which read well, some of which are true, and others are simply absurd. Would it not be well to consider, too, that parents should decide upon a certain period of the year when their children shall take their vacations and live out of doors, learn to play, learn to observe out-of-door life, etc? If teachers are given any choice in the matter of vacation the result will be confusing to the child on his return to the school. His teacher has changed during vacation, and she may be quite a different personality from the teacher with whom he formerly studied. Then, after a few weeks, the old teacher comes back, but does not realize, or does not know, what has gone on in her absence, and the poor child is confronted with the constant changing of conditions, which is not conducive to simple and easy educational requirements.

It is to be hoped that this whole question will be decided by a referendum vote, at least before any experiments are made which are based upon brief observations of only a few.

NORTH DAKOTA'S PUBLIC HEALTH PROGRAM

North Dakota has apparently entered upon a splendid program of public health. Governor Frazier, in his message to the legislature, made urgent recommendations that a strong and efficient board of health be established, that every county have a school nurse, that the bureau of venereal diseases be amply supplied with funds, and that tracoma be stamped out of the state.

As the physicians and the newspapers of North Dakota will do their full share in this work, it is now up to the legislature to do its share, which former legislatures have persistently refused to do.

MISCELLANY

THE ANTI-TUBERCULOSIS COMMITTEE OF MINNEAPOLIS: ITS DEVELOPMENT AND WORK

How the Anti-Tuberculosis Committee of Minneapolis has developed in three years from an obscure body consisting of a secretary and a half-time stenographer, to one of the most progressive health organizations in the state, was outlined at its recent annual meeting, by Lauritz S. Swenson, former minister to Denmark, and acting chairman of the committee in the absence of Dr. Henry Wireman Cook, who is in Washington on Red Cross work.

Today the Committee has a staff of seven trained workers: Otto N. Bradley, executive secretary; Miss Florence Leininger, children's worker; Miss Kathryne Radebaugh, investigator; Mrs. Jack Langebek, publicity director; Mrs. Frank Cavanor, extension secretary; Miss Lanore Ward, social service worker at Glen Lake Sanatorium, and Oscar Alm, industrial lecturer.

Its annual budget has been swelled from $5,000 to $31,000. It does not confine its activities to the checking of tuberculosis alone, but co-operates in all measures for civic betterment, realizing that whatever increases the body's powers of resistance raises living standards, improves working conditions, and aids in the eradication of the white plague.

Over 200,000 persons were reached during the past year through exhibits, talks, literature, and motion-pictures. Sixty thousand health pamphlets and 70,000 leaflets were distributed, talks were given before 4,000 people, and motion-pictures were shown in the open air to 20,000 men, women, and children.

Among the outstanding features of the past year's work was an aggressive open-air classroom and Health Crusader compaign, institution of a social service worker at Glen Lake County Sanatorium, publication of a monthly health bulletin, plans for a children's preventorium, institution of public health courses at the University of Minnesota, and a series of community health exhibits. A novel piece of work was a study of the records of men examined by the local draft boards. It was discovered that of 10,000 men called over 13 per cent were disqualified on account of physical unfitness, and 276 had active tuberculosis or symptoms of it. The names and addresses of these men were furnished to the city and state health departments, and they are being aided in every way possible under the existing lack of sanatorium conditions.

The sum of $500 was expended during the summer on outings for anemic children and those living in tuberculous families. They were taken to the parks, where they were regaled with supervised play and plenty of milk and crackers.

A three years' program for the defeat of tuberculosis in Minneapolis has been prepared, and is being used by other health agencies as a basis for present and future work.

The following activities are planned for the coming year: securing of funds for the erection of a children's preventorium at Glen Lake; erection of a separate hos-

pital for incurables; passage of the public health and health insurance bills; institution of medical departments in industrial plants; medical examination of employees; increase in the staff of the city health department's tuberculosis division; a tuberculosis dispensary for children; establishment of a fellowship at the state university; the care and rehabilitation of discharged tuberculous soldiers; and an increased educational campaign.

ORAL SEPSIS AND PUBLIC HEALTH

Since the theory was first advanced that localized low-grade infections, particularly of the teeth and tonsils, are responsible for many systemic disorders, the cause of which has long been a mystery, medical and dental literature has teemed with articles on the subject.

While a critical analysis of this literature tends to show that in many instances definite deductions have been based on insufficient and inconclusive evidence, there is no question but that such focal infections are often the primary cause of serious functional and even fatal organic diseases.

Abscesses at the roots of the teeth are found usually when the dental pulp has been destroyed either by bacterial action or by the dentist for the purpose of crowning or bridging teeth. Such conditions occur through neglect or improper care of the teeth.

Dental inspection of school children and the introduction of oral hygiene into school curricula have been of great value, but public health activity should not rest here. Mothers' clubs, infant-welfare stations, social-welfare organizations, and all other possible agencies should be employed in order that mothers may know the necessity for proper care of the temporary teeth from the time of their eruption; that they may understand the fallacy of extracting these teeth in advance of the absorption of their roots; and that they may fully appreciate the value of periodical visits to the dentist.—Bulletin of the New York State Department of Health.

NEWS ITEMS

Dr. F. W. Metcalf has moved from Winton to Fulda.

Dr. H. O. Ruud has moved from Evansville to Alexandria.

Dr. C. N. Brooks has moved from Herreid, S. D., to Gibson City, Ill.

Dr. F. D. Brandenberg has moved from Minneapolis to New Richland.

The West Side General Hospital of St. Paul graduated a class of three nurses last month.

Dr. M. P. Morse has moved from Minnesota Lake to Le Roy, where he formerly practiced.

Major H. Z. Silver, chief of the medical staff at Fort Snelling, has resigned from the army.

Dr. Carlton Graves, of Aitken, was appointed health officer of that city last month by the city council.

Dr. T. O. Sanbo, a retired physician of Lommen, S. D., has returned to the practice of medicine at that place.

Ashland, Bayfield, and Iron Counties, of Wisconsin, are to build at Salino a tri-county tuberculosis sanatorium.

Miss Ella M. Beaulieu, a student nurse at St. Mary's Hospital, died last month of pneumonia following influenza.

Dr. Charles Proshek, of New Prague, has taken over the practice of the late Dr. T. W. Hovorka at St. Cloud.

Dr. J. E. Lommen, of Fordville, N. D., has been appointed superintendent of the Walsh County Board of Health.

In order to facilitate the reporting of contagious diseases, Duluth furnishes her physicians stamped printed postcards.

Dr. A. H. Zollenbach, of Faribault, has been elected county physician of Rice County by the Board of County Commissioners.

The City and County Hospital of St. Paul cared for 7,659 patients in 1918, and the number of deaths in the Hospital was 927.

The Children's Bureau of the U. S. Department of Labor has been making a study of the child welfare conditions at Chisholm.

Lieut. Clayton K. Williams, of St. Paul, was recently promoted to the rank of captain for distinguished service at the capture of Sedan.

A malpractice suit against Dr. Joseph Nicholson, of Brainerd, was dismissed by the judge, its lack of merit causing its failure to receive a hearing.

Dr. H. M. McIntyre, a graduate of Rush, who has been connected with a mining company at Ely, Nevada, has taken up general practice in Waseca.

The Eitel Hospital of Minneapolis has given up its corporate form, and will be conducted as a partnership, of which Dr. and Mrs. Eitel are the partners.

Dr. Daniel Avery Langworthy, an old-time physician of the Northwest, died in Minneapolis last month at the age of 87. Interment was at Courtenay, N. D.

Dr. George E. Peterson, of Dassel, died last month at the age of 40. Dr. Peterson was a graduate of Hamline, Class of '05, and specialized in ophthalmology.

Dr. W. K. Quackenbush, the new superintendent of the Otter Tail County Tuberculosis Sani-

torium, has been holding weekly tuberculosis clinics in Fergus Falls.

Dr. W. G. Magee, of Watertown, S. D., has become a member of the firm Drs. Giere, Johnson, and Koren, now changed to Drs. Giere, Johnson, Koren and Magee.

Dr. W. E. Patterson, of Hibbing, has begun work in his new location at Westbrook, and is receiving royal welcome at that place long without a physician during the influenza epidemic.

Dr. Scott Searles, of Minneapolis, has joined the firm of Drs. Benson and Sandven, of Willmar. Dr. Searles is a graduate of Michigan, and has specialized in internal medicine and children's diseases.

The legislature of North Dakota, now in session, will probably pass a law requiring medical inspection in all public schools and the appointment of a county school nurse in every county in the state.

Amidon, N. D., is one of the smaller towns of the Northwest that have not been able to obtain physicians to locate in them. A nurse has been doing the medical work of a large territory around Amidon.

Dr. A. C. Strachauer has been appointed acting chief of the Department of Surgery of the medical school of the University of Minnesota for one year, filling the position made vacant by the death of Dr. J. E. More.

At the annual meeting of the Clay-Becker Sanitarium Board, Dr. O. J. Hagen, of Moorhead, was re-elected president; Dr. O. K. Winberg, of Lola Park, vice-president; and Miss Mary Beall, secretary.

Portland, Oregon, and Minneapolis outrank all other cities of the United States in the percentage of young people—that is, between twenty and forty years of age—in their populations. This accounts, in a measure, for their low death-rates.

The Visiting Nurses' Association of Minneapolis, in its recent annual report, shows that almost 400,000 visits were made by its nurses last year, and that $1,500 was spent on the care of patients, in addition to the free service given them.

The City and County Hospital (the Naeve Hospital) of Albert Lea ended its fiscal year last month with a credit balance on its ledger, and did so without sacrifice of efficiency or equipment. A good superintendent — Miss Anna Kippen!

Dr. Park B. Jenkins, of Waubay, S. D., Superintendent of the South Dakota State Board of Health, reports a marked decrease in the number of cases of influenza in the state. Like reports come from North Dakota, Montana, and Minnesota.

Dr. W. J. Cochrane, who has practiced in Lake City for nearly twenty years, has sold his practice to his partner's brother, Dr. Harry J. Bowers, of Potosi, Wis. Dr. Cochrane will spend the winter in postgraduate work in Chicago, and will then decide where to locate.

A bill recently introduced in the North Dakota legislature requires that the State Board of Nurses' Examiners shall be composed of five graduate members elected for five years, at least two of whom must have had two or more years' experience in educational work among nurses.

Dr. Rupert Blue, Surgeon General of the Public Health Service, has appointed February 9 as Health Sunday in the United States, and has asked the ministers of the country to preach sermons on the subject of protection to our returning soldiers and sailors against social diseases.

At the annual meeting of the Winona County Medical Society, held at Winona last month, the following officers were elected: President, Dr. F. H. Clay, St. Charles; vice-president, Dr. Oswald Leicht; treasurer, Dr. W. F. C. Heise, Winona; secretary, Dr. Hugh F. McGaughey, Winona.

Dr. W. B. Wright, assistant superintendent of the City and County Hospital of St. Paul, resigned last month on account of friction with the Board of Control growing out of Dr. Wright's conception of his duties. Supt. Ancker appointed Dr. D. B. Rice, of the Hospital staff, as successor to Dr. Wright.

Dr. Mitchell Mikkelsen, the oldest practicing physician in Faribault County, died last month as the result of undue exposure caused by responding to a country call. Dr. Mikkelsen had practiced in Faribault County for nearly fifty years, most of the time in Wells. He was said to be the best loved man in his community.

Dean Lyon, of the Medical School of the University of Minnesota, has practically arranged with the City Hospital of St. Paul and the City Hospital of Minneapolis to accept senior members of the medical class as junior hospital internes, thus giving each senior student six months of hospital work before graduation. The same opportunity will be furnished by the University Hospital.

The Cass County (N. D.) Medical Society held its annual meeting last month at Fargo. Dr. J. P. Aylen, whose experience in the army was so varied and interesting, was elected president. The other officers elected were as follows: Vice-president, Dr. J. W. Awty; secretary, Dr. P. H. Burton; treasurer, Dr. Paul Sorkness; delegate, Dr. J. H. Rindlaub, all of Fargo.

The Grand Forks District Medical Society of North Dakota held its annual meeting at Grand Forks last month. A paper on influenza was read by Dr. A. G. Long, of the Public Health Laboratory; and the following officers were elected for the current year: President, Dr. G. J. Gislason; vice-president, Dr. H. G. Wautot, treasurer, Dr. H. W. F. Law; secretary, Dr. H. J. Friesen; delegate, Dr. G. M. Williamson—all of Grand Forks.

The Sioux Falls (S. D.) District Medical Society held its annual meeting last month in Sioux Falls. Dr. Kugler, a medical missionary, told of medical work in the hospitals of India, and Dr. Camp, of All Saints School, told of the effect of influenza upon the Indians of the Reservation. The following officers were elected: President, Dr. J. B. Eagan, Dell Rapids; vice-president, Dr. W. E. Donahoe, Sioux Falls; secretary-treasurer, Dr. S. A. Keller, Sioux Falls; delegate, Dr. J. G. Parsons, Sioux Falls.

OFFICE POSITION WANTED

A competent girl who lives at home desires a position in a physician's or dentist's office in Minneapolis. Best of references given. Address 161, care of this office.

PHYSICIAN WANTED

A physician is wanted in a town of 450, situated in a rich wheat country on the Red River. Nearest physicians 17 miles east and 17 miles west and 22 miles south. Address 206, care of this office.

MINNEAPOLIS OFFICE FOR RENT

There is no better residential location in Minneapolis for a physician than at the corner of 14th Ave. and Fourth St. S. E., a block from the University; and just the office a physician needs is offered for rent at that point by A. E. Simms, 331 14th Ave. S. E., Minneapolis. Tel., East 1102.

ASSISTANT WANTED

Wanted, at once, an assistant in a $10,000 unopposed general practice; small town in northeastern South Dakota; everything furnished, including cases, instruments, auto, livery team, modern offices, and up-to-date equipment. Chance to buy partnership or entire practice in one or two years. Give full information in first letter regarding age, family, general and medical education, experience in general practice, health, habits, and lowest acceptable cash salary for first six or twelve months. Address 201, care of this office.

POSITION WANTED

Physician wants a position, preferably with an elderly physician, in a small town. Object principally to gain more rapidly practical knowledge. Address 171, care of this office.

PHYSICIAN WANTED

A physician is wanted for a large $4,000 practice in one of the best towns in North Dakota, Red River Valley. High school, light, good roads, fine American people. Competitors 11, 30, 16 and 18 miles distant. Address 174, care of JOURNAL LANCET.

FINE OPENING FOR A YOUNG SURGEON

Would like to take up with a good young surgeon a proposition whereby he can establish himself in a city of 5,000 in northern Minnesota and have good hospital facilities. Cash receipts have been from $500 to $1,200 per month. Address 205, care of this office.

SOUTH DAKOTA PRACTICE FOR SALE

A practice, paying $8,000 a year, is offered to the purchaser of my office equipment and first quality drugs. One other physician. Population of town, 700. Well-improved country in southeastern part of South Dakota. Twenty-four insurance appointments. Established twelve years. Catholic and Protestant churches. Will give option on office-residence or lease same. A competent physician can do exceedingly well here. Address 202, care of this office.

AN EXCELLENT OPENING FOR A PHYSICIAN

Because of the recent death of one of two physicians in a South Dakota county seat of 1,000 people, another physician is greatly needed. The village has three churches and a good high school. A six to eight thousand dollar practice can be promptly worked up. The widow of the deceased physician will sell or rent her residence, or rent two office rooms in the residence; and will sell the office furniture and medical books left by her husband. The opening is indeed a fine one. Address, for particulars, 203, care of this office.

POSITION IN PHYSICIAN'S OFFICE BY A CAPABLE WOMAN

Qualification: Applicant has had six years' teaching experience in commercial subjects, two years as principal of the shorthand department; three years' work in general office work, and one year of medical work as secretary in a large clinic, doing the stenographic work, including dictation during the history-taking and operations; can handle any medical dictation, and can do reception-room work; will be glad to take up and learn laboratory work. The best of references will be furnished. Address 172, care of this office.

NEW ORLEANS POLYCLINIC

The Graduate School of Medicine of the Tulane University of Louisiana, thirty-second annual session, opened Sept. 23, 1918, and closes June 7, 1919. Physicians will find the Polyclinic an excellent means for posting themselves upon modern progress in all branches of medicine and surgery, including laboratory and cadaveric work. Special attention given to military matters. For further information address Charles Chassaignac, M. D., Dean, postoffice drawer 770, New Orleans. Tulane also offers highest class education leading to degrees in medicine, pharmacy, dentistry, hygiene and tropical medicine.

PUBLISHER'S DEPARTMENT

HARVARD *X*-RAY LABORATORY OF MINNEAPOLIS

The above-named laboratory is doing a distinctive and much-needed work for the medical and dental professions, and is doing it thoroughly. This laboratory is making *x*-ray pictures of the teeth, the sinuses, and the extremities. Its radiograms are so clear and sharply defined that they are a great aid in diagnosis, to both the trained and the untrained reader of radiograms.

The importance of such work cannot be over-estimated. For full information address the Harvard *X*-Ray Laboratory, 522-523 Syndicate Block, Minneapolis.

THE FIRELESS COOKER

The continued high prices of fuel and food make a fireless cooker a money-saving household appliance, besides being a labor-saving and, in a large measure, a health-saving device. In addition to this, many kinds of food are rarely cooked as well over wood, coal, or gas alone as in the fireless cooker.

In spite of the fact that every person who uses such a cooker becomes greatly pleased with it, and will never go back to the old style, it is difficult to make people comprehend the excellence of this household utensil.

Ask your dealer to show you a "Duplex Fireless Stove" or send to the manufacturers for circular. Address the Durham Manufacturing Co., Muncie, Indiana.

TREATMENT INFLUENZA COMPLICATIONS

Now that the main force of the epidemic of influenza has passed, there will be many patients, suffering with sequelae, such as eye, ear, nose, throat difficulties, as well as persistent involvement of the stomach, intestines, bladder, and kidneys. In addition various neuroses and neuralgias, with the great physical and mental depression, will handicap those convalescent from influenza.

This condition is well met by a course of treatment with Proteogen No. 12. Injection of 1 c.c. twice a week for six injections usually clears up most of the sequelae, and builds up the blood picture in these patients to a point where mental and physical depression is entirely overcome.

In this connection it is well to bear in mind the effect of Proteogen No. 3 in the treatment of tubercular condition which may be lit up by an attack of influenza. It may be stated that a large majority of those dead with influenzal pneumonia were in reality suffering with pulmonary tuberculosis. Many that have survived the ravages of the influenza are now suffering with an exacerbation of pulmonary tuberculosis. Proteogen No. 3 will produce very decided beneficial effects in a short time in these cases, and should be persisted in for a long time until every clinical evidence of the disease has disappeared.

These very important matters should receive immediate attention on the part of every physician, and further information may be obtained from the Wm. S. Merrell Chemical Company, Cincinnati.

WOMEN IN THE WORLD'S PROGRESS

In this day when women's work is so important in keeping the wheels of the world's progress moving, their physical condition should be conserved in every way, whether it be in the home, in commercial offices, or in the hospital as a nurse, as the value of their services is beyond calculation. But unfortunately, much time is lost through menstrual irregularities, and much suffering incident to the pain thereto.

Dysmenorrhea is possibly the most frequent cause for the loss of time, and in mitigating this condition, not alone is the conservation of time an item, but the relief from pain is a humanitarian act.

In the treatment of Dysmenorrhea, Hayden's Viburnum Compound will add many hours and days of comfort each month to the lives of the sufferers. Its universal adoption and recognition by the profession was established upon the satisfactory results which it renders in Dysmenorrhea.

Given in two teaspoonful doses administered in hot water will afford relief from pain. It contains no narcotics, nor habit-forming drugs, and if you are not familiar with its efficiency, a request to the New York Pharmaceutical Company, Bedford Springs, Bedford, Mass., will bring you samples for clinical demonstration, and a brochure giving formula and many suggestive thoughts in the use of this product.

HIGH PRICES CAUSE RECORD LOW PROFITS

Armour and Company's financial statement issued today, states that food prices were so burdensome during the past fiscal year that profit margins were almost wiped out and despite a record volume of business—$861,000,000 in this country and for export—earnings were much less than the sum fixed by the Food Administration as being fair and proper.

The net income for the year was $15,416,973.13, representing a return of 14.7 per cent on common stock after making provision for dividends on preferred stock. Excepting $2,000,000 which constituted the dividend paid to common stockholders, the year's earnings were reinvested in the business.

On the average net capital invested in all lines, the profits represented a return of 9 per cent. The income from the meat food business—limited by the government to 9 per cent—fell way below that figure to about half what was authorized. The net profit on total volume of business including everything sold by the firm, amounted to 1.8 cents on each dollar of sales.

In explanation of high prices, Mr. Armour stated that his firm paid out to livestock producers $100,000,000 more than the same weight would have cost in 1917.

BETHESDA HOSPITAL OF ST. PAUL

Bethesda Hospital of St. Paul is a church hospital which charges moderate rates and surrounds its patrons with all the comforts of home and only such attention as can be obtained from a group of men and women whose motto is service. Its service and accommodations meet the needs of the sick, and no patient is permitted to leave the institution with cause for a word of criticism of its management.

Bethesda is a large hospital centrally located, and is under the constant care of the Rev. J. A. Krantz, D. D., its superintendent.

A BETTER SURGICAL DRESSING

Cellosilk is the name of a new surgical dressing which has properties that commend themselves to surgeons. It is composed of cotton, gums, and oils. It is perfectly transparent so that the wound covered by it may be examined without removing the wrapping. It will not adhere to the wound, and thus relieves the patient of the pain caused by an adhering bandage.

A single use of this new bandage is sufficient to demonstrate its value. It is made by the Marshalltown Laboratories, Marshalltown, Iowa. A 12-foot roll, 9 inches wide, sells for $1.00, and the 12-foot roll, 18 inches wide, sells for $2.00.

No doubt perfect satisfaction is guaranteed by the manufacturers.

THE ST. JAMES HOSPITAL

The St. James Hospital, located at St. James, Minn., is one of the institutions that is well serving a large and prosperous community; and more of such hospitals are needed. This hospital was fortunate in inheriting an elegant building, which was erected for a hotel; but any fair-sized community can build such a structure, and it is worth while.

The St. James Hospital and Sanitarium is admirably located, serves a large community, and serves it well. Mental and nervous diseases are given special attention by a resident well-qualified physician.

For full information, address Dr. Graham M. Lisor, resident physician, St. James, Minn.

ANASARCIN CHEMICAL CO.

It happens not infrequently that many physicians under the stress and strain of a busy practice neglect to give due consideration to those little things which often partly affect the course of any prescribed treatment.

It is not always possible to remove or remedy pathological conditions present. It is often necessary and effective to treat symptoms. An example of this may be found in the case of the effusion of serous fluid into the tissues, known variously as dropsy, ascipes, adema, etc. The existence of any of these conditions suggests first of all circulatory stasis, which in turn implies that the heart already suffering from an excessive load must put forth greater efforts to overcome the handicap.

Therapeutic measures employed with a view to stimulating the kidneys alone in the effort to get rid of excessive fluid, fail to help the heart. On the other hand, it is possible to increase cardiac function and enable the heart to overcome to a great extent, stasis in the circulation, and at the same time promote free diuresis, and thus bring about team play, and between the heart and the kidneys to bring about resorption of the effused fluid, or its elimination from the body.

A combination which has proved clinically very efficient in the treatment of such conditions is Anasarcin, which, while it is effective, does not produce irritation, has no cumulative action or effect, and may be continued for almost an indefinite period. Interesting literature and samples of the product will be sent to any physician on request.

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PERIAPICAL ABSCESSES AND FOCAL INFECTIONS*

BY GEORGE EARL, M.D.
ST. PAUL

Dentistry is one of the medical specialties. Its interrelationship with the rest of the body makes such joint meetings as we have tonight most natural. There is only one underlying principle of physiology, bacteriology, or pathology.

We, of course, must have the proper conception of infections as causation of disease, not forgetting diet, habits, elimination, mental attitude, and the internal secretions. All these questions enter into every medical case, and tend to make one skeptical of any treatment. One always asks, Was it not time for the patient to get well anyway? or, Was not the régime instituted the sole factor in benefiting the patient? These considerations affect the question of periapical abscesses, but no more or less than any other medical problem. If we are to demand absolute proof here, we should demand it everywhere; and such an attitude of mind would mean complete agnosticism and nihilism as regards every treatment. I hold no brief for favoritism for apical abscesses, but I request that the subject be approached on the same lines on which we approach, and adjudged by the same rules that we apply to, any other medical problem.

Surely, there is here no special pathology or bacteriology. Streptococci are streptococci wherever found. Diseased bone is diseased bone in the jaw, as well as in the leg. That there are streptococci present in these apical abscesses, I take it, is not questioned. They have been demonstrated in laboratories the world over, and by such numbers of competent bacteriologists that the limits of my paper do not even permit a résumé of the literature. We have demonstrated this repeatedly in the laboratory of the Mounds Park Sanitarium for our own satisfaction and to confirm the work. In 100 laboratory examinations we found streptococci in 80 per cent of the cases cultured, and in the remainder we found pneumococci and various types of staphylococci. The diseased bone surrounding apical abscesses is often comparable to osteomyelitis in other parts of the body. Microscopic slides and experiments on dogs show this.

Is there such a thing as infection? No one denies the infection of syphilis, of tuberculosis, or of certain manifest processes of local pus or septicemia and pyemia. But about the streptococci in focal infection? That streptococci carried by the blood-stream from focal points of infection in the body do cause serious acute inflammation in some distant organ, seems quite certain from the fact that in an acutely inflamed appendix, after its removal and a thorough sterilization of its mucous and peritoneal surfaces, cultures of streptococci can be grown from the remaining wall, which evidently must have been carried there from some focal point of infection. The same has been proven of the gall-bladder and other organs. These infections are at times insidious and slow, but none the less serious. A small stream over a long period of time accomplishes the same as a large stream in a short time.

*Presented at a joint meeting of the physicians and dentists of St. Paul, held under the auspices of the Ramsey County Medical Society, St. Paul, March, 1918.

There are those who believe in focal infections everywhere except in the teeth. An internist recently said tonsils at times are undoubtedly responsible for bad hearts, and we rather believe the tonsil is chief offender. Contrast this with the statement of a nose and throat man who felt the tonsils were overdone and not enough sinus work performed. Undoubtedly, we all are riding our hobbies, and forgetting all else. I believe this is the reason that the theory of focal infections is not better appreciated, and that the results are at times not satisfactory.

When a case is cited where So-and-so had the teeth extracted for such-and-such a condition without benefit, what does it prove? There are two considerations. First, we ask whether there is any other complicating condition present, for, I take it, the day has passed forever when one demands in every case a single cause. Given a chronic case where perhaps diet, environment, mental attitude, heredity, elimination, and what not are unfavorable and where perhaps there are multiple focal infections, as in the antrum, tonsils, gall-bladder, and perhaps due to those chief offenders, syphilis and tuberculosis, is it not ridiculous in such to expect a cure or even noticeable results from the removal of root abscesses? I would not minimize the importance of abscesses in such cases, but if they are only one-tenth or one-fifth of the cause you can expect only that much improvement, and a one-tenth improvement in a long chronic orthopedic or nervous case is not very noticeable. Take it in the work of the orthopedist, say, among tubercular children of the poorer families with unfavorable heredity and environment, and where mercurial treatment benefits somewhat in spite of negative Wassermanns indicating possible syphilitic taint—we cannot here expect that the removal of an apical abscess or two can make any dramatic and immediate effect. Nevertheless, I believe that such teeth should be extracted on the accepted surgical principle of "where there is pus, evacuate," hoping that it will add its share however small, to the ultimate benefit of the patient by removing a condition tending to lowered resistance. Or, in the work of the neurologist, the most of whose chronic cases have a similarly large number of causes and considerations, in these cases one cannot expect to see any immediate or dramatic result. The infection in such cases is there, but insidious and slow. Of course, this does not apply to all these cases.

The second consideration in unsatisfactory results after extraction, which must be proven before the case can be given as evidence, is, Was the work thoroughly done? Take the tonsil question. The specialist knows better than any one else how difficult it is in all cases to make a thorough removal. The internist knows that, if tags are left, pus-pockets can be found underneath, and the condition he is treating will not improve until a second and more thorough removal is done. The same is true with the teeth. Unless thorough removal with curettage is done, no result can be expected. One would not treat osteomyelitis in any other place without curetting. Unless all the abscesses are removed no results can be expected; and this brings up the question of diagnosis. Clinical symptoms locally are important, such, for instance, as tenderness on pressure. We have removed teeth where a clear *x*-ray could not be obtained; but, with the clinical symptoms and the history present, we have done so without regret.

The size of the absorptive area is not very important because it is deceptive. In other words, in many cases where the *x*-ray findings are, to say the least, indistinct, we often have a large abscess, considerable bone-destruction, and streptococci. This does not mean that every apparent absorptive area is an abscess. The peculiar formations of the antrum, the openings of the nerve canals, would lead those ignorant into error. The test whether the tooth is alive or not will often differentiate, for the rule is laid down that an abscess never occurs in a live tooth. And I again wish to give the dental profession, or the dental branch of the medical profession, the great credit due for this knowledge.

I realize there are many objections that appear practical, such as:

1. Why can we not treat these cases? Many good men believe it can be done successfully. Our experience would show that the treatment of a root abscess is not successful, as a rule. We have followed many of these treatment cases over periods of time only to find that the result we were seeking was not obtained. If there is present a heart, kidney, or gastro-intestinal condition, is it fair to risk the patient's health over a period of months, facing extraction most likely, in the end? The dentist who opposes the removal of abscesses in such conditions must prove his contention, because it is opposite to all surgical teaching.

2. Regarding root-amputations: There are a few apparent successes, but the number is so few that we never recommend this procedure. It is

permissible, for instance, in the case of a person who is sensitive about losing anterior teeth, as a trial; but usually later, if not successful, the patient is then reconciled to extraction. Here again the urgency of the disease is a consideration.

3. Are not the teeth needed for mastication? Is not this so important that it outweighs any harm coming from them? Dentistry is not so hopeless. Cunning mechanical devices permit good mastication, as a rule. Good clean plates are far preferable to masses of sepsis. There are cases where successful mechanical devices cannot be substituted, and such cases should have due consideration.

We looked over our records for the year 1917, and found that at the Sanitarium and our offices we, who have been especially interested in this subject, have had extractions done during the one year in over 400 patients. Of course, in most of these patients there were other procedures, surgical and medical, for we do not believe in hobbying the teeth at the expense of every other treatment. Yet we did find some 55 cases where practically nothing but the teeth were attended to.

To give the case-histories of 55 patients is obviously beyond the limits of time allotted me. They included types of visceral degeneration or inflammation, affections of the glandular systems, the body fluids, the skeletal structures, and the covering of the body. Clinically speaking, the results have been as satisfactory as any other régime we institute. In a few cases the results have been dramatic. In other cases results have come after a period of time. In the few cases in which we have seen no result, nothing else that we or any one else could have done promised help. All patients cannot be benefited. I know of no medical "cure-all."

In preparing this paper I wondered what the general medical opinion is on this subject. The literature would give views extending over a period of years, but it is the literature of just the last few years, when the subject has been intensely under examination, that is of importance. What I wanted was the ideas prevailing now, in the month of March, 1918, after these years of test. I did not think of this till March 14, just ten days ago, when I sent to all Class A Medical Schools as listed in the Directory of the American Medical Association, the following letter:

"I am interested in focal infections from the point of view of root-abscesses. Would it be too much trouble to write me of your opinion on this point?"

Twenty-eight definite replies were received. Three were not sure of their ground, and wished further investigation. Twenty-five, or 90 per cent, took a very positive stand as to the evils of diseased teeth.

The overwhelming opinion of advanced medical thought is, then, that apical abscesses are a serious source of infection. The higher the standing of the medical school, the more keen was its interest.

CONCLUSIONS

1. Apical abscesses have been demonstrated as much as abscesses in any other location to harbor streptococci, and therefore to be possible sources of focal infection.

2. A proper perspective of the importance of periapical abscesses in a given case can be secured only by a most thorough general diagnosis at the hands of specialists in each branch, as so many other things can cause similar symptoms and retard the health of the patient. A case report of extraction is permissible only in the above light.

3. Thoroughness of extraction is of the same importance as thoroughness in the removal of any other focal infection.

4. Diagnosis requires considerable qualification, as the *x*-ray interpretation is difficult. A small shadow may mean a large abscess. One must remember the antrum and nerve openings.

5. The need of the teeth for mastication can be well met, as a rule, by mechanical devices, and, furthermore, the health of the patient is the prime consideration.

6. In a few cases our results have been dramatic, and, on the whole, as satisfactory as any other method of treatment we institute.

7. On those who would advise a departure from the generally accepted rule of "where there is pus evacuate," falls the burden of proof. In the light of proven bacteriologic and microscopic examinations over the entire country, it is a mighty responsibility to assume that periapical abscesses should not be removed by surgical means.

A SECRETARY'S APPEAL TO A ONCE LIVE MEDICAL SOCIETY*

By J. H. James, M.D.
MANKATO, MINNESOTA

Undoubtedly you have all read the indictment of our profession recently published in the *Journal of the American Medical Association*, with the editorial comments and also the rejoinder. If you have not it would be well for you to do so. While the writer of the indictment undoubtedly tells some truths he fails to tell them all, and it amounts to a scathing arraignment of our profession from the standpoint of the layman, and so permits us to see ourselves as others see us, and also from the viewpoint of him who has been appointed by statute in the State of Illinois to register and regulate the practice of medicine and to abolish the practice of it by those who are unfit. It explains most vividly the difficulties with which he and also we who are most vitally interested have to contend, not only with quacks and cults, but with some of the acts of our own legitimately licensed practioners. Were there time it would be interesting to review his strictures in detail, but this is impossible at this time. The editorial, suggestions and comments, however, should have our consideration, for they are pertinent and timely. I will quote a few of them:

"One's senses are startled by phrases in modern writings on social and economic subjects. One hears of equilization of risk and return, of conscription of wealth, of health insurance, of national ownership, of state medicine, of a league of nations, of an international medical alliance, and similar conceptions. With these, and part of these, will be new problems of the relation of the physicians to each other and the public. Physicians will have as much influence as any other class in weaving the new fabric. It is well to realize and to appreciate a stronger and closer knitting together of the profession itself, of stronger organization, so that we may face these problems with the strength of minds united. Thus the medical profession may be able, not only to influence for the necessarily best interests of the public in the new order, but for its own as well. The medical profession has served, now serves, and will continue to serve when called upon, but in its altruism it must not forget that it will have to guard its own rights and prerogatives, if they are to be guarded at all."

The above suggestion and warning is timely. We are all familiar with the old saying that "in union there is strength," and this has been amplified in the recent war where all good Americans were united in the one object. Were the profession all thus united we might accomplish wonders. The mobilizing of our army has emphasized the importance of discipline, respect for authority, unity of action. The editor pleads for a more generous support of the profession and says that this is the time for a favorable advance movement. It is the time for the friends of medicine to strike, and to strike hard, against those of its adherents who drag its honor in the dust. This is a time also for our own local society to get busy. There is no lack of good material in our corporate body; we have as good minds as can be found in any like number in any locality, and there is no reason but indifference and inertia to prevent us from being an active and progressive society, a power in the community, and a stimulating factor to ourselves. There is no reason why we should not stand out before the public and the medical world united, and with such luminosity that every reputable physician in our county would be anxious and willing to join our ranks as members.

The time was, and at no distant date, when our Society stood high as a component of the State Association, and was considered as one of the most active and "up and coming" of all the county societies. We have within us, if properly directed and unanimously exerted, a power still left to wield a wonderful influence in the community, and also in the profession at large. When investments cease to pay, it is the wisdom of successful financiers to get rid of them, and this applies to society memberships, as well as to financial transactions. When we fail to get compensation from either, it is time to abandon it and instil new capital, new energy, new interest, whereby dividends are restored; or the society should be turned over to a receiver. Can we all truthfully say that our membership has been a remunerative asset, or of special interest to us, during the past two or three years, as manifested by our regular attendance and our liberal responses when solicited? I was greatly discouraged in my recent efforts to interest the members in the preparation of a program for

*Read before the Blue Earth County Medical Society December, 1918, and published herein by vote of the Society.

our last meeting. It seemed to me a great waste of time and energy in a fruitless effort. I was unable to create either interest or enthusiasm. There seemed to be an indifference as to whether we had either a program or even a meeting. If you remember, I once gave up the secretaryship of the Society for this same reason, namely, that I was unable to infuse either interest or co-operation. At that time I attributed it to my own inefficient personality, but since my last experience I have concluded it was not entirely my fault. I believe we have allowed ourselves to become stale. Our interests in the Society have waned, and there now exists no sufficient motive for its continuance. We have gotten tired of hearing ourselves, and there now exists no sufficient motive for the Society's continuance. We have become careless and self-centered; there is no apparent and pressing need to spur us on to concentrated action; there is a want of individual pride in membership; and our original perspective has been neglected and lost. We seem to have forgotten that the purpose of our organization was to unite the profession in closer fellowship; that by united action and co-operation we might grow stronger, become better physicians, individually and collectively; and that we might be able to wield a stronger influence for the betterment of the profession as a whole, and to be of greater use to mankind. We forget Article 2 of our constitution, which reads, "The purpose of the Society shall be to bring into one organization the physicians of the county, so that, by frequent meetings and full and free interchange of views, they may secure such intelligence, unity, and harmony in every phase of their labor as will elevate and make effective the opinions of the profession in all scientific, legislative, public health, material, and social affairs, to the end that the profession may receive the respect and support, within its own ranks and from the community, to which its honorable history and great achievements entitle it."

We forget Section 1 of Chapter 2, which says: "Its influence shall be constantly exerted to better the scientific, material, and social condition of every physician within its jurisdiction. Systematic efforts shall be made by each member, and by the Society as a whole, to increase the membership until it embraces every reputable physician in the county." Also Section 4, which says, "The Society shall endeavor to educate its members to the belief that the physician should be a leader in the community, in character, in learning, in dignified and manly bearing, and in courteous and open treatment of his brother."

In joining the Society we subscribe to a lofty ideal; are we keeping it in view? Are we striving to reach our goal?

If we are to have a part in the coming reconstruction period, if we are to help wield an influence, we must begin the regeneration of our Society and its ideals. In order to do this we must first reconstruct our individual interest, and each of us must resolve to do his part, instead of "letting George do it," and again unite our forces and pull together.

I would suggest for the coming year that each member see to it that the Society meetings shall have our first attention, that we resolve that attendance shall be obligatory except in case of dire emergency or incapacity. A full house is an inspiration; a meager attendance is always depressing. It has been my observation over a considerable period of time that we can find the time to do the thing we most want to do; we can most always make an opportunity. As members it should not only be our duty to be present at the meetings, but also to take such part as assigned, for otherwise of what personal benefit is the Society to us? The public can well afford, in most instances, to dispense with our services during the few brief hours we are in session, and the physician who cares can easily, by a little adjustment of his time, so arrange his affairs as to permit regular attendance. Dollars and cents should cut no figure when the good of the Society is at stake.

Emergencies, physical incapacity, or absence from home should be the only excuse tolerated. It should be our aim to have every reputable physician within our territory a member of the Society. We should conduct our meetings in such a manner as to draw every physician in the county naturally to want to share in the advantages of membership, and our attitude towards outside physicians and each other should be such as to make the Society an attraction. Bickerings should have no place within our gatherings, and I am glad to note that none such have appeared for several years, which is to our great credit. No man liveth to himself alone, neither does a community or a profession. We are all dependents; we should, therefore, live for the glory and well-being of each other, exalting virtues and condoning each other's faults, for who among us has no faults?

Thus to stimulate the good within us, we should be boosters, not kickers, and thus ennoble the profession as a whole. Jealousies, bick-

erings, or veiled criticisms not only result in injury to ourselves, but cause distrust in the profession as a whole, as is set forth in the scandalous article referred to in the beginning, and such can be abolished by our own individual conscientious efforts towards righteous attitude and treatment of each other and our fellows. Let us, at the approach of the New Year, renew our ideals, our "Hippocratic oath," and resolve for the future that we will be more faithful, and fail neither our Society, ourselves, nor our Alma Maters. Let us resolve to respond heartily to all that the Society demands; attend meetings regularly, let nothing avoidable interfere, take our part as far as possible in all its activities, grow individually and collectively, and make the Society an honor, a personal help, a mutual good. I sometimes think were we to do like our fraternal brotherhoods, and repeat our fraternal obligations, either at the commencement or the close of our meetings, it would be a wise reminder of promises often ignored or apparently forgotten. Honest and sincere competition should always be welcome, for without it there would be lack of stimulus for greater endeavor in the most of us. It only spurs us to better endeavor, better work, better deeds. We should strive to do to others as we would have them do to us under similar circumstances; we should suspend all unrighteous judgments, letting them lie in abeyance until from every angle and perspective they have been weighed, scrutinized, and every rumor traced to its original source, verified, digested. Nothing succeeds like success. Accomplishment is limited only by power exerted. Ideals are necessary for success of best effort; let us particularly establish and seek a high ideal for our Society, and strain every effort to attain it.

There is nothing personal herein; all I have said applies to myself as to any other; petty jealousies and personal faults are as inherent in my nature as in that of any other physician, possibly they may be greater, they are surely many, and possibly greater, and are well known.

My professional activities, I regret, are rapidly drawing to a close. I have little more to serve, little favor or respect to gain either from the profession or the public. I have already been granted all the honors within your jurisdiction, therefore my appeal is entirely utilitarian; it is for greater efficiency, better fellowship for each and every one of you, for unity of purpose, the accomplishment of all that is best, for undying honor and glory for each, and nothing less can come to him who serves his fullest.

CASE RECORDS AND THEIR USE*

IN RELATION TO HOSPITAL SUCCESS

Bulletin Issued by the American College of Surgeons

To create grim earnestness among hospitals in the matter of case records and to indicate the relation of case records to good hospital service are the purposes of these pages. The sheets or record-forms described in the following pages are published simultaneously by the College in Bulletin No. 2, Vol. IV. The sole object in issuing these two bulletins is to make for the better practice of medicine; and whatever value they may present toward this end springs from the good co-operation of the hospitals with the College in its program of hospital standardization.

The keeping of case records in hospitals came about in a natural fashion. Long ago, as the practice of medicine developed into a profession, the more competent and conscientious practitioners made notes for themselves as to the physical condition of their various patients and as to what they did for their patients. These notes were aids to the memories of the doctors who made them, and a guide for other doctors when similar cases were presented; they were an effort in the interest of the patient. Then by very swift degrees medicine became a more complex and exact science and the need for notes or records in clinical practice became more imperative; and as this proces went on and great strides forward occurred in medical science like the discovery of bacteria, anesthesia, and asepsis, there came a quick development of hospitals with their cleanliness, their laboratories, their *x*-ray apparatus, their dietitians, their trained nurses, and their case records. All of these advances are to aid the doctor in the care of his patients.

The whole story of hospitals is one of natural evolution. Today the hospital is in a striking period of transition, changing from the kindly-disposed boarding house for sick people, which met a genuine need in its day, to the institution

*Editorial comment is made on the paper on page 91 of this issue.—The Editor.

worth while on its own account, rendering service to the sick for which it assumes responsibility. In other words, the modern hospital is an institution where not only the competent study and treatment of sick people *may* occur, but where, also, the competent study and treatment of every man, woman, and child who enters its service as a patient *do* occur as a matter of clear-cut institutional policy.

The remarkable success in recent years, financially and otherwise, of the comparatively few hospitals which have instituted and carried forward this policy indicates the lines of hospital advancement during at least the next decade. The reasons for the success of these hospitals are the quick appreciation and gratitude on the part of the public for the service rendered and the resultant bonds of confidence created between these hospitals and their communities. The wholesome factor of competition means among hospitals, as among individuals or among nations, that success and prosperity will come where due on the basis of merit.

TEST OF MEDICAL PATRIOTISM

But to return now to case records: First, what are these records? Second, what element are the records in the success of a hospital?

First, case records are an orderly and written statement of the complaint of the patient, of the findings as to the physical and mental condition of the patient, of the treatment, medical and surgical, of the complications, if any, and of the final results.

Second, as to the relation of case records to the success of the hospital: If case records are essential to good hospital service, just why are they essential?

In answer to this question let us keep vividly in mind that the hospital exists for the patient. Let us assume that the hospital seeks to give worthy service to every man, woman, and child admitted to its care; that in return it seeks the confidence and good-will, and even the financial aid, of its community. If these conditions are true, it follows that the hospital creates an equation which consists of service to the sick on its own part, balanced by proportionate and practical gratitude for that service on the part of the public. The next and inevitable step is that the truth of the equation be sharply tested. Rational and convincing evidence as to the hospital's service is wanted by the public, and not general or sentimental optimism. In other words, because of its very importance, the hospital is under fire of criticism. In some practical fashion it must account for efficient performance in every department. It must account for the ability and in some measure for the moral worth of the doctors privileged to practice within its walls; for the completeness and dependability of its laboratory reports, including the *x*-ray; for the faithfulness and intelligence of its superintendent, its internes, and its nurses; and for the strength of all of these to work together in single purposefulness. How shall the hospital make this accounting? Well, results are what count and the results are to be found in case records.

The first practical reason, therefore, as here stated for the keeping of case records is that these records are a pledge of loyalty of service on the part of the hospital to its community. For example, a patient comes to the hospital, a diagnosis of appendicitis is made, the patient is operated upon and dies; unless an accurate record of the case has been kept showing the hopeless state of the patient and what was done for him, how can either the hospital or the surgeon justify a death from simple appendicitis?

CASE RECORDS IN ARMY HOSPITALS

The relation of the army hospitals since the beginning of the Great War to the people of this country is an excellent illustration in point. The officers of the medical department of the United States Army realized at the outset that the Surgeon General's office was accountable to the entire nation for the treatment of each soldier admitted to sick report. They realized that each soldier was, in case of sickness, entitled to the best service known to the science of medicine; they realized that the people of the nation were entitled to exact evidence that the sick soldier received such care. The report just issued by the Surgeon General to the Secretary of War for the year ending June 30, 1918, is a monument in the history of medicine for its effect on the civil practice of medicine. The Surgeon General in this report has presented in an intelligible fashion the exact facts as to the care and treatment of soldiers in the army hospitals. The entire report is based upon data taken from the individual case records of the soldiers. These records for each patient were written under strict military orders, and not only was the completeness of the records checked up constantly through the Surgeon General's Office, but the character of intelligence displayed by the medical officers through these records was also constantly held up to critical review.

Space does not permit here an analysis of the Surgeon General's report. But the question may fairly be asked as to whether or not the civilian hospital is not quite as much obligated to report the character of its work to its community as are the army hospitals to report to the Secretary of War and through the Secretary to the public. There is but one basis on which such report may be made and that is from properly kept case records.

To illustrate again, let us suppose that a workman enters a hospital and learns that he needs an operation for hernia. Is it not reasonable that he should ask: "Based on your figures for other cases like mine during the past year, what chances have I to be at work again after the operation?" The question is of importance to the workman. Can the hospital answer it? Can the staff and officers claim with easy conscience that they protect the welfare of this man by every safeguard known to medical science? If so, how can they prove the claim? Or is the best of service too good for this man?

Facts, facts,—facts in the relevant personal history of each case, facts developed in the physical findings, facts brought to light by the laboratories and the *x*-ray, facts deduced through pliable wisdom from all of these and expressed as diagnoses,—these are the foundation of the hospital. And unless the hospital as a matter of institutional policy is in possession of these facts, filed in an orderly fashion in justification of its work, it is entitled to little credit in its community or in the medical profession. To repeat, the character of the case records is a test of the hospital's loyalty to service.

In taking the position here that the hospital is a public service corporation and that as such it is accountable, the question of ownership or of control is not raised. It is immaterial whether the hospital is municipal, state, or private. The contention here is simply that every hospital is a public service institution just as a college is a public service institution. Columbia University, for example, is a privately endowed university controlled by a self-perpetuating board of trustees. In a broad sense, however, Columbia considers herself a public service institution. It makes an annual accounting to the public for the expenditure of all of its funds; it states clearly at frequent intervals its various aims; and it analyzes its efforts to fulfill its aims. It states facts. Through the result of this policy and the wisdom of carrying it out, Columbia stands in an exalted position throughout the world. Millions of dollars go to it unsought because it has won and merited public confidence.

CHECK UPON CHARACTER OF SERVICE

Emphasis in the foregoing paragraphs has been placed upon case records as a test of medical honesty, or let us call it medical patriotism. A second and quite as significant a reason for these records lies in their use to prevent or minimize errors in all clinical practice; to serve as a direct test of efficiency in hospital service.

Medicine in its application to the needs of the human body is both an art and a science. It can never be reduced to the simplicity or to the certainty that two and two are four. The variable factor of judgment and variations in individual patients is always present. Case records, if wisely kept, offer an invaluable means to the hospital staff to profit constantly by its own experience in practice. This phase of record keeping was especially emphasized by the College in the announcement of its first hospital survey; and in this connection the use of a summary card to make available for study and review the important data of the records was urged. But just how as a practical problem of administration are case records to be used as a test of efficiency? This question leads to a consideration of staff meetings.

WHY MEETINGS OF HOSPITAL STAFF?

The whole scheme of the universe is organization. If you pick up a gosling in the orchard, the flock of geese will attack you; you will learn a practical lesson about organization and about cooperation. The stone men hunted the mammoth together. Our early pioneers built block-houses wherein whole communities could gather and protect themselves from Indians. The building of towns, whether they be towns of people or towns of squirrels or of prairie dogs, is predicated on community action and on organization.

The individual doctor in the hospital can usually accomplish very little single-handed. But working together, all of the doctors or the staff can accomplish almost any right thing which they set out to do. Their business then is to get together, to agree upon what they want, and to turn wishes into action.

Doctors want good service for their patients. Now, the staff meeting is the means for the doctors to get together. It is the occasion, for example, at which they find out the extent of seemingly unnecessary infection among surgical cases in the hospital, the character of these infections,

and the causes of them. Almost any problem which will present itself to the staff is related directly or indirectly to the case records. Certainly the number of septic cases, the character of the infections, and the probable causes of the infections will be recorded in an adequate record system.

But harmony of purpose at staff meetings and clinical facts are not alone enough. The meetings must be an assembling of live people to discuss live subjects for a definite purpose. Each meeting must "get somewhere."

"Are we having unnecessary infections in the surgical service?" asks the head of the surgical department at the staff meeting. Certainly it is his business to know the answer to this question; and in a broad sense it is the business of every member of the staff to know the answer to this question. What are the facts? Where are the infections coming from, if they exist? Whose cases are they? What or who is to blame? Is it the operating-room sterilization, or dressing-room uncleanliness, or water-infection, or is the doctor himself to blame? Open and frank discussion of such topics will lead to action and do more for a hospital than anything else.

But let us not assume that the staff meeting is to develop into a scolding bureau. Let us rather assume that every man and every woman is doing his and her level best to get good results, and that the only sure way to get these results is to talk about the failures. More can usually be accomplished by recognition of merit, kindly expressed, than by scolding.

Again, let us suppose that the medical service is up for review. Is everything going well there? Is the dietary in good hands? Is the nursing happy, conscientious, and adequate? Are patients given the individual attention they need? Is the hospital clean? Is the air kept pure? Is the humidity right in the wards and in the rooms? Has each case received due and prompt study, aided by competent laboratory reports?

Is there any reason why such subjects as these should not be discussed by the staff with freedom, warmth, and candor? Will not such discussion increase manyfold the efficiency of the hospital?

Again, the staff may consider the material equipment of the hospital. Is there the necessary apparatus, let us say, in the examining room? Let us suppose that there is not and that the superintendent says that he has not the money to buy the apparatus. If the superintendent reports lack of funds to one doctor, the chances are that the doctor will accept the report and let it go at that; but if the superintendent reports to the staff, the staff should not and will not be casually put off. It will insist upon its need and effectively lay the responsibility upon the trustees. It will win.

Is there co-ordination between the departments of the hospital, and co-operation between individuals? Is there team-work? If not, the hospital will fail, for success and team-work live together. It takes harmony in all departments and between all departments to spell hospital success. To establish the habit of frankness in talking about these things at staff meetings will do much to create harmony.

There will be times when the trustees should be present at staff meetings to listen to wholesome truths about the hospital and about themselves and about individual members of the staff. More good can be done in five minutes' talk with the trustees in this way than can be done in a whole year of talk behind the backs of trustees.

How often ought staff meetings to be held? Often enough to keep up the active interest in the work of the institution; often enough to keep the staff members talking about hospital progress from meeting to meeting; not often enough to cause the meetings to be a burden to busy doctors. One evening a week ought not to be too much to ask of every man on the staff of a hospital to spend at staff meetings.

The objection is sometimes raised that "the staff won't come." If this is true, why "won't" the staff come? The real answer is perhaps that the meetings are perfunctory, uninteresting, deadly monotonous, and uninstructive. If, in addition to the purposes of meeting above described, two or three clinical cases can be shown at each staff meeting,—cases that have been well worked up, the records of which are complete, the resources of the hospital being exhausted to obtain a diagnosis of the disease, and if all these points are brought out by the man whose case is being shown, and if there is instruction and information,—then the staff meetings will be like meetings which those same medical men gladly go hundreds of miles to attend.

A staff member does not have to be a star in the medical sky to present a most interesting and instructive case. All he has to do is to have an interesting case and to present the facts marshaled in logical order. Then he will get the interest of his fellows on the staff, and meetings at which this kind of work is done will be popular and productive.

The staff meeting in every hospital ought to be a red-letter day in that institution, and everything in the hospital ought to radiate toward these staff meetings,—criticisms, complaints, and commendation. The staff meetings are the clearing-house of the hospital. The value of these meetings may be briefly summarized:

1. The fostering of great-heartedness, of determination, of courage, and of desire to grow in ability and worth. With right comradeship and purpose, the difficult task becomes the interesting task, and excuses for failure give way to action towards success. Too much value cannot be attached to the right spirit of service in a hospital staff; and human nature is such that we need constant, sincere interchange with our fellows to keep that spirit at its brightest glow. "Repeat to me every criticism you hear," said Pasteur; "I shall prefer them to praise."

2. The elimination to a practical degree of incompetence, negligence, or laziness in the hospital, first, because the staff meetings serve to stimulate and to inspire each member to his highest effort; and, second, because elements of incompetence, negligence, etc., will become so plain that those who continue guilty will either voluntarily resign from the privileges of practice in the hospital or be requested so to do. All of this means protection to the patient.

3. The internes and the younger men in medicine today will in a brief period become the masters in the profession. The character of their leadership will depend much upon the inspiration gained by example during the early years of their life's work. Fearlessness in seeking truth and evidences of honor which will develop at staff meetings will put into the hands of internes the lights which shall burn after the present masters are gone.

4. Staff meetings in time will be productive of data relative to the treatment of disease which are comparable among hospitals. When the practice of regular staff meetings becomes general among hospitals and when the facts and results of practice are regularly summarized in intelligible form, we shall have a mass of information which will not only lead directly to the advancement of medicine, but which will also create a wholesome rivalry among hospitals and thereby stimulate further progress.

PRACTICAL POINTS ABOUT CASE RECORDS

1. The basis of a good case record is keen native ability, sound training in medicine, and the use of both in the care of a patient. Upon the condition of the patient depends the extent of the record. The record consists only of such facts as will be of worth to the patient in the study and treatment of the case; and to the profession for its information in the treatment of similar cases in the future.

2. Whatever the nature of a serious illness, that illness has a relation to the entire body and, though briefly stated, this relation should be recorded. Novel writing under the guise of case records is a waste of time, energy, and money.

3. The psychology of case records is admirably designed for the prosperity of the hospital. A patient who is convinced that his case has been wisely studied and considered of sufficient importance to be recorded is usually a satisfied patient. A bond at once results from this procedure between the patient and the hospital to their mutual advantage. Sound, complete physical examinations often make unnecessary what seems at first a necessary surgical operation.

4. Insistence upon case records in no way reduces the practice of medicine to a machine-made process. The entire process is human, and the records are human documents. They are the sincerity and reality of good work; they are the muffins and not the promise of muffins. Good records have something in them that can be made at no mill. They are not dull facts recorded as a mere routine. They are the records both of an art and of a science, the whole design of which is shot through with the purpose to prolong life, to relieve suffering, to make life glad and nutritious. They are a chief basis of progress in the medical profession, a means to extend the science of medicine and to make surer medical practice; and when the value of case records is estimated at its true worth, all wavering as to the task of keeping them will end in determination.

5. Who is to be responsible for hospital records? The old saying that everybody's business is nobody's business applies to case records. If the records are worth keeping and if they are worth keeping so that their contents are available for study and review, then somebody must have charge of them; somebody must check them up, see that they are all promptly complete, conveniently accessible, and protected from misuse. In a small institution, not oversupplied with funds, it may be wise to double up on duties in this matter. The person who keeps the records may also have other things to do, perhaps in the receiving-room, or in the bookkeeping department. But in a hospital of considerable size and especially in a

hospital of great earnestness, the records are the sole responsibility of one person.

Supervision of records usually falls to a woman; and if the woman is competent, it may be understood at the outset that she will not be popular for a long time at least with those for whom she works. She will be a nagger and a nuisance to those who are indisposed to keep up to the hour with their records. She will have to appeal to the doctors, and sometimes appeal over the heads of individual doctors to the staff as a whole. But by insistence upon performance of duty the record-keeper will ultimately win the hearty good-will of the staff and render also a service mightily worth while.

6. A word about filing records and indexing: If records are useful, they ought to be continually useful, which means that they must be accessible. They cannot be useful if tied in bundles indiscriminately and packed away in the attic or basement.

How are records to be filed? Of course, they must be filed so that any record can be quickly found in good and usable shape. Many methods of filing records have been proposed and tried, but no system has been found that answers better all purposes than the envelope system or the vertical filing system, each record in its own envelope or folder. The patient's name and number appears on the corner of the envelope or folder so that one may readily find any record. The system of binding records in volumes meets with little approval in practice. The volumes cannot freely be taken from the library and hence the doctor who wishes to examine the record, especially of a patient who returns to the hospital on a second or subsequent visit, must practically have an abstract made of that record. When a patient comes into a hospital and it develops that he or she has been there before, the new record should be added to the former one. It is not necessary that the record on this last visit should have the same number.

This consideration raises the question of indexing. If there is a librarian at the hospital who has charge of the records, she will make her service most useful by keeping three indices, each in alphabetical order, of the cases as follows: First, an index of the names of the patients; second, an index of the final diagnosis; and, third, an index of the organs affected. Other index entries may also be kept which concern complications.

Records indexed in this way are available for the purposes of the literature. The hospital also can readily find the patient's record where the patient is concerned by name; and for the purposes of the literature the librarian can pick out required records without trouble. If a staff member, for example, is writing on pneumonia, the index shows all of the pneumonias which have occurred in the hospital, including those with pneumonia as a secondary complication. Again, if the doctor is writing about an organ or the diseases of an organ, or is studying some problem incident to a certain organ, all the cases that have ever been in the hospital in which this particular organ was involved can be procured without delay.

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THE VALIANT NURSE

We desire to call special attention to the work done by American nurses overseas and in the cantonments, as well as by those who have remained at home for various legitimate reasons.

It is said that two hundred Red Cross nurses died from influenza, in this country and abroad, and that the majority of them contracted the disease while taking care of influenza-infected soldiers. At all events we must pay our respect to the woman who accepts the challenge of war, and who goes abroad knowing that her life is endangered. She is a soldier, and she should be recognized as such. Unfortunately, in this country nurses are not entitled to rank, whereas abroad, particularly in the British and French armies, they range all the way from lieutenants up to captains and majors, or, at least, have rank which is equivalent to the rank of their associates. Without the protection offered by the proper rank the nurse is not in a position to take care of the wounded soldier as she should, because she is outranked even by a male orderly and by all officers above that rank. She has no real authority, and, not infrequently, the soldier is neglected because some other subordinate official dictates to her as to what she shall or shall not do. Undoubtedly, this same thing has happened to officers in the Medical Corps. They have been overridden by orders from superior officers outside of the Medical Corps, and they have had to submit, as have the nurses.

From all the evidence that we can obtain of the very large number of nurses enlisted for work in the home camps and overseas, comparatively few have been returned as incompetent, which speaks well for the nurse's training.

THE JOURNAL-LANCET wishes to pay its tribute especially to the nurses who have gone from Minneapolis, and to report the number of those who are in service on this side and on the other side of the water. The enlistment of the nurse is quite different from the enlistment of the private soldier or officer, in that the Government is not obliged to pay out anything for the training of the nurse, whereas the Government has spent enormous sums on the training of the officers and soldiers.

Each hospital furnishing a nurse received assistance from the public, either through voluntary funds or through moneys set aside for the special training of the nurse in connection with hospital work. Consequently, in distinction from the soldier the nurse was able to step into her uniform and almost immediately begin her work; and this furnishes a very strong argument for the struggling hospital that often has great difficulty in making both ends meet, but is yet able to supply trained help to the public and for the Government; and these nurses not only deserve our sincere appreciation, but they deserve from the public in general, and the Government in particular, the strongest kind of recognition. To the nurses who died in service there should be the same recognition from the State that is given to the men who have died during the war; and yet we wonder whether the public and the State appreciate the sacrifice on the part of the nurse.

Many nurses from hospitals all over the country answered the first call when America entered the war; a number had previously volunteered their services, and, doubtless, were accepted in some part of the army; and in nearly every hospital there may be seen a roll of honor, in which the names of the nurses are exposed to public observation on the same kind of a pennant as that upon which the name of physicians are registered.

Of all the Minneapolis hospitals which have paid due respect to the nurses who enlisted, the Swedish Hospital is first in line. This hospital has published a booklet called "In Our Country's Service," in which the roll of honor stands first, followed by an expression of their gratification over the loyalty and patriotism of their graduates. The names, the military addresses, and the home addresses are published as a lasting memorial to the nurses abroad and at home from this institution. The Swedish Hospital leads off with 82 nurses, or 65 per cent of its graduates,

who enrolled for war service up to 1918; and 70, or 56 per cent of the graduates, were inducted into actual service. Out of the number from the Swedish Hospital, as far as the records show, none have died or have been killed in service.

Asbury Hospital has a list, which includes several in the Red Cross nurses, of 78; but as all graduated nurses are obliged to be listed in the Red Cross, this does not seem as great in proportion, and yet it is the largest number from any hospital here. Two of the Asbury nurses died in France, and a number of nurses from Asbury enlisted in the Red Cross work, but were not in the immediate vicinity of fighting, and they were located so far away that it has been impossible to get full information. The list from Asbury is not very clearly defined, and we give the number as it was sent to us by the superintendent.

The number of nurses enlisted from the City Hospital was 84, 55 of whom were called into the service, 38 in overseas work, and 17 in home work or in cantonments; and of these, two died.

St. Mary's Hospital had 27 nurses in the Government service, 4 overseas, and 2 nurses died.

From the Abbott Hospital 14 of the nurses enlisted for service abroad; 7 of these were sent abroad, 1 was sent to Porto Rico, and 1 is in the navy. There have been no deaths among them.

St. Barnabas is credited with 34 nurses serving in the country and in the navy, here and abroad, and so far as known none have died.

The Northwestern Hospital has 56 enlisted for home and foreign service. Some have been ill in France, but only one death has occurred, and that from influenza contracted on the boat.

Rest Hospital has a list of 4 nurses overseas, and 11 in home cantonments, with 1 death overseas; so that there are 14 in the service at the present time. One other nurse, a graduate from Rest Hospital, was sent over by the Woman's Club to do special work among refugees. Three of the nurses are in army service, while 12 are serving under the Red Cross.

The Norwegian Deaconess Hospital is credited with 9 nurses called, both abroad and for cantonment work; 2 have returned home, and 7 are still in service. There have been no deaths among these.

The Eitel Hospital has 43 nurses in service at home and abroad, and 6 nurses have been assigned for home defense service; and during the influenza epidemic 5 student nurses were sent to Duluth to work with the refugees from the fire zone. Other nurses were sent to various parts of Minnesota and South Dakota to care for influenza patients, for which the Hospital receives no remuneration.

Hillcrest Hospital shows a list of 9 enlisted, and no deaths.

The University Hospital had 31 called, 23 of whom have been abroad, the other 8 are in the cantonments in this country. One nurse died of influenza at Camp Dodge.

St. Andrews Hospital had 4 nurses called.

Other of the smaller hospitals offered nurses, or nurses from them enlisted, but were not called.

The total number of nurses called from Minneapolis was 470, of whom 10 died in service. This is a remarkable showing, but, doubtless, other cities of the Minneapolis class, and smaller cities of the Northwest have contributed in the proportion shown above, making a large total of nurses.

It would seem fitting that some action be taken either by the State legislature or by Congress, to recognize the work of these women, and to memorialize them in some way, or at least to give them a badge which would be a lasting evidence of their service during this war. Taking into consideration the large number of nurses from this city alone, the fury of a widespread epidemic, and the shortage of nurses for civilian relief, we find added reason for keen appreciation of what the nursing force has done; and we are strongly of the opinion that the nurses should be remembered with gratitude for their patriotism, for the sacrifice of their lives, and for the time spent in active work.

REFORMS IN HOSPITALS

Under the title of "Case Records and Their Use," the American College of Surgeons has issued a bulletin, intended, we believe, only for surgeons and probably only for members of the College. We take the liberty of reprinting this bulletin, and we do so, not only for the words of wisdom found in what the bulletin says of the value of case records for surgeons, but for the greater words of wisdom to be found by him who reads between the lines, as especially the general practitioner will read.

Now, the truth is reform in the matter of indiscriminate operations, whether done by the man seeking more fees, by the man who cannot make proper diagnoses, or by the man who has specialized himself into the believe that every abnormal condition, real or psychological, in any

organ of the human body, demands an operation —reform in this matter is imperative.

The most urgent demand for such reform must come, and does come, from the general practitioner, for he is the one who sees the evil after-effects of unnecessary operations, for he has to do with the unfortunate patients in, probably, ninety-five per cent of the cases, whose lamentable history may be wholly unknown to the surgeons.

We have nothing but words of praise for this bulletin, the writers of which, no doubt, had in mind the evils of which we speak, although direct reference to it is not made by them. We wish, however, more upon the subject of the late after-effects might have been said.

The literature of practically all surgical papers is woefully deficient in reports of the late after-effects. Take, for instance, the matter of tonsillectomy, which, with the added presumption of infection causing most of the ills of the human race, is now admitted to be a very dangerous fad. What are the late results of this operation? Nobody seems to know. The same is true of the twin fad of tooth-infection, a hobby that has been ridden well-nigh to death by many good men.

We highly commend this bulletin to all of our readers,—general practitioners and specialists in all lines. It would be, indeed, unfortunate if it were read only by surgeons, for reforms generally come from without, not from within.

A NEW HEALTH CRUSADE

For the fifteen weeks from February 9 to May 24 the whole country is to make a modern Field of the Cloth of Gold in the new chivalry, that is, health chivalry. The school children of the United States, answering the challenge of the Junior Red Cross and the National Tuberculosis Association, are to go into training as Modern Health Crusaders, and to test their prowess in health knighthood. There are to be ranks and guerdons for every boy and girl who shows valor in the contest,—an illustrated certificate for a page, a button for a squire, a silver badge for a knight, and a gold badge for a knight banneret. Each will wear the double-barred crimson cross, which is the emblem of those who wage war against the white plague.

In Minneapolis and throughout Hennepin County, the contest is to be carried on and financed by the Junior Red Cross under the direction of Mrs. O. A. Schall, head of the local chapter. The Anti-Tuberculosis Committee, under the direction of Mr. Otto W. Bradley, newly appointed executive secretary, will distribute all emblems and other supplies, and will do all the organizing outside of the city public schools, which will be in charge of Miss Elizabeth Hall of the Board of Education. The schools will be divided into groups, with each class a unit, and a pennant will be awarded to the foremost unit in each group.

The Health Tournament commenced February 9 with the keeping of "health chore cards" by all school children between 6 and 16 years of age. These cards call for the daily observance of such health rules as sleeping with open windows, tooth-brushing, outdoor play, personal cleanliness, the eating of simple food, and the avoidance of careless spitting and sneezing. At the end of two weeks those who perform these chores faithfully become squires, and are eligible to compete, in turn, for the higher ranks of squire, knight, and knight banneret.

Parents can help their children to win distinction "on the field" by encouraging them to observe these rules and aiding them to keep an accurate record. Pupils of public, private, and parochial schools may participate.

While physicians may be unable to get up much enthusiasm in the means adopted to carry on this work, they should be exceedingly enthusiastic over the purposes of the crusade and should help the work along in every possible way, even to becoming boys again, adopting the insignia of knights errant, and joining any procession that is marching toward the goal set by the leaders of the crusade. "Yours for Health, L. E. P.," if you please, should be the motto of the doctor, if that will help along the good work.

HERESY!

The only man who can be accused, in a gentlemanly manner, of heresy in religion, politics, or medicine (we do not know in what order to put this trio to produce either a climax or an anticlimax), is the man who is abundantly able to defend himself in the battle that such a charge is certain to start.

It is with this justification for our act that we bring the charge—and it is out of his own mouth —of heresy against the editor of the *Minnesota Public Health Journal*. Here is the ground for the charge, found in the issue of that lively publication for January 9, 1919 (the quotation is

found in the paper's department of queries and answers):

Question: Why do you advocate allowing a child to eat whenever hungry? Is it not contrary to the teaching of most doctors?

Allowing a child to eat whenever hungry and all he wants as well ought not to be contrary to the teachings of any doctor, though unfortunately there are people who still believe that appetite is a useless function and that the amount of food which a child needs should be governed by rules, which, to say the least, are decidedly parsimonious.

As a result of such erroneous beliefs many children are actually half starved simply because parents have come into the habit of thinking that children who need food to build up their bodies to usually twenty times the original weight and to supply heat and energy for all the work of learning and playing which the normal child does every day need much less food than they, who have reached their full growth. If you could think of the children as the hardest working members of your family you could see at once the reason why they should be given food whenever they want it, and all that they want of it. Let the normal child's appetite, not yours, gauge the amount of food he should have. That is why he has an appetite.

What will "most doctors," especially the pediatrists, say to this heretical teaching by the genial, fighting editor of the *Minnesota Public Health Journal*, whose mission is to *educate* the people?

We want to warn "most doctors" that it's a man's job to take up cudgels with our good friend, Dr. H. W. Hill.

CORRESPONDENCE

A NEW CURE FOR THE FLU

To the Editor:

"A little humor now and then
Is enjoyed by the best of men."

I was consulted a few days ago by the parents of a girl thirteen years old as to any ill effects that may have resulted from the mistake that was made in giving this girl epsom salts. When she was taken ill they sent over to a neighbor's for some salts. After a speedy recovery of the patient it was discovered that the little girl had taken three generous doses of plaster-of-Paris.

Here's a chance for the chemists to get busy. One explanation of the effects advanced to me was that the body temperature and fluids kept the plaster in solution; however, kindly excuse me from trying the experiment, as a sudden setting of the plaster around a man's sigmoid flexure would be apt to cause a deuced inconvenience, don't you know?

Yours truly,
Geo. W. Frasier, M. D.

Hill City, Minn., Feb. 10, 1919.

SOME RESULTS OF THE WAR ON BOTH MEDICAL MEN AND LAYMEN

To the Editor:

Prior to this war various evolutionary forces, without intelligent aid or organized assistance on the part of the medical profession, gradually compelled and are still compelling the followers of medicine into—

1. Accepting the specialist.
2. Demanding hospital facilities.
3. Associating and segregating into more or less organized groups.
4. Establishing private clinics, such as the Mayo Clinic and similar institutions.
5. Establishing, as just instituted by Columbia University, of New York, a still more advanced form of scientific medical organization, a clinical laboratory.

The same evolutionary forces have caused the laity—

1. To form mutual benefit organizations for the sick.
2. To demand contract practice.
3. To form hospital associations.
4. To demand state aid.
5. To demand free clinics.

In every one of these vitally important politico-economic movements, and in view of the fact that millions of men will return after the war and demand for themselves and for their families the same scientific treatment they have experienced under military organization, medicine as a profession has failed to recognize the same exciting cause in each instance,—an economic demand that the theoretical standard of efficiency, "medical ethics," must be replaced by a more practical standard, "ethical economics." This standard demands the application of scientific methods through economic organization to every-day life, so that efficient medical and surgical treatment will come within the reach, not of the few who can receive hospital treatment in standard institutions, but of every human being.

Confronted by the above politico-economic facts, a very pertinent question presents itself to the medical profession at large, What is medical organization (medical education) doing to solve these problems at a time when an imminent recon-

struction period confronts every form of organized society, including the profession of medicine?

Based on the observation and experience of twenty years, the writer claims that virtually nothing practical has been systematically undertaken.

Nowhere is there evidence that medical organization (medical education) has ever recognized three basic psychologic factors that govern all intelligent human acts:

1. One hundred per cent of the representatives of medicine (physicians) are human beings, and the minds of the highest and lowest are compounded of the same elements, held subject to the same laws of action; and the knowledge that any one of them possesses comes, as it does to every other human being, through the ordinary channels of the senses.

2. In the search for knowledge in every branch of human society, including medicine, science has produced innumerable mechanical aids to increase the efficiency of the senses of man; therefore, logically, all things being equal, the mind of man gathers knowledge in proportion (a) to the number of mechanical aids employed to increase the efficiency of the senses, and (b) the accuracy with which these aids are employed.

3. As a rule, normal human emotions govern every human being, including the physician; therefore, if the recompense for labor does not enable the physician to carry overhead expenses; does not give him time and funds for improvement, study, travel and necessary recreation; does not produce profit that is protection for his family and for himself in sickness and old age, he can neither give efficient scientific service nor continue to progress. If adequately recompensed he can give scientific service far more readily, and is more likely to progress.

Yet in the face of these obvious revolutionary politico-economic movements and the basic psychological facts that govern intelligent human action, medical education is still demanding for every individual admitted to the study of any branch of the science and art of medicine a high standard of preparatory education, in substance a B. A. degree from a recognized educational institution.

This standard, combined with the principles of education that are employed in every medical college after admission to study is such that it can be justly claimed that the educational methods pursued tend to make the graduate physician in this work-a-day world pursue the practice of medicine as a pure science, that can isolate itself, that needs no association with the applied sciences, especially economics. For instance, medical education during all these years has apparently never conceived of the practical necessity of recognizing the psychological fact No. 1 as a pre-educational factor of utmost importance.

The United States Government, on the other hand, by the present war has been unceremoniously forced into recognizing its educational value, as evidenced by the first standard of admission to the aviation service, where the highest possible human skill is required in order to successfully destroy life. In this initial examination the most accurate possible physical and mental tests are employed, in order to ascertain not only the inherent character and personality of the candidate, but more especially the acuteness, stability, and durability of *every one* of his senses.

In the profession of medicine, however, where there is a demand, if it were possible, for even greater character and personality, acuteness, stability, and durability of the senses, the object of the physician being to preserve life, no recognition is given to the fact that efficiency in applying abstract knowledge depends upon the efficiency, not only of one, but of all, of the special senses.

The student of medicine may be deficient in one or more of his special senses, have little tactile sensibility, a poor sense of smell or hearing, defective eyesight, little character and no personality adaptable to a physician, yet no tests are made to ascertain or correct these defects, and the student is graduated and permitted without any organized supervision to try to preserve, where he would not on the same grounds be permitted to destroy, life.

As to the educational value of the psychological fact No. 2, there can be no question that the mechanical aids to scientific medicine (which include all laboratory methods, and even history-filing and compilation may be added) have become so numerous, have so developed in detail, that to attain efficiency requires not general but definite technical knowledge.

There can be no question that medicine will become organized in the future, and when so organized it can be no exception to the general rule, and must attain efficiency by having subdivision of labor, therefore organization of labor and equipment.

Medical education as conducted today may be ethical, but it is still decidedly theoretical. Medical schools virtually graduate only officers, and

then only colonels. No provision is made for officers of lesser rank, for the privates in the form of technicians. For privates we as a profession must take the unsuccessful physician, volunteer nurse, half-trained office girls, or any kind of unskilled help available, whom each physician must train for himself after his own sweet will in order to fill the ranks of scientific medicine with privates. Yet economic organization is staring the profession in the face. With this army thus organized we guarantee to defend the public from disease, and then wonder why our efforts as a profession are not appreciated!

Even for the colonel, who may later wish and be willing to work for a higher rank—for instance, to become a specialist—there is no institution provided where through concentration of skilled leaders, equipment, technical assistance, and economic organization he can learn his specialty from A to Z, and be instructed and equipped with a modified plan of economic organization, whereby he can do justice to the public and his profession by maintaining and delivering the high standard of goods which he advertises to sell in competition with the inferior grades of the cults by attaching to his name an M.D.

As a profession, in most of our medical colleges, we unquestionably try to manufacture a high standard of goods, which goods must be sold in the open market to the public. We advertise to the public that the sign "M.D." signifies the highest standard. Yet as a profession have we adopted any organized means whereby we can demonstrate to the buyers, the laity, the value of standard "A" as compared with the imitation "B," and in so doing increase the demand for standard "A" goods, to the benefit of both producer and consumer? I think not.

The public, through universal education, is being taught to think, to reason, yet the medical profession today, like the cults, is asking the public to accept goods on faith without investigation, and we claim as a standard science based on reason, not wholly on faith.

If the profession of medicine will not undertake to solve these politico-economic problems for itself, it is true that evolutionary forces will solve them for us, but with brute force and a corresponding indiscriminate destruction, unless man employs the intelligence that nature has given him to anticipate evolutionary movements, through the use of intelligence scientifically applied, but governed by the higher human emotions.

It is not within the limits of this letter even to outline the means to the end that experience suggests. But the old adage always proves true that where there's a will there's a way.

The object of this letter is to arouse, with your assistance, sufficient sentiment to instigate a systematic, organized movement to attain the end sought,—the practical application of ethical economics,—so that humanity may be efficiently served by the profession of medicine, and the profession win universal respect and attain efficiency through following out, not only ethically but economically, the dictates of the noblest of all the sciences.

The accompanying pamphlet is intended to prove that such a movement is feasible, for if an imperfect, experimental organization, based on a belief in principles, carried on by an individual, can apply these principles of ethical economics successfully, certainly with the intelligence of the profession concentrated towards that end there can be no question of the outcome of the many economic problems confronting the science of medicine.

Criticism of this pamphlet is invited, and the writer would appreciate notice or information of any criticism or suggestion, direct or indirect, that may be offered.

Respectfully,

G. Shearman Peterkin, M.D.

Seattle, Washington, February 10, 1919.

MISCELLANY

TRIBUTES OF HONOR TO DOCTOR JOHN H. JAMES, OF MANKATO, AND DOCTOR GEORGE F. MERRITT, OF ST. PETER

The Southern Minnesota Medical Association, at its meeting in Mankato last month, paid tributes to two of its honored members, richly deserved by the honorable and useful lives of such members. The Association honored itself in its act, and set a precedent that should never be abused, but should be often followed.

Drs. James and Merritt were the special guests of the Association at its banquet; and on behalf of the Association Dr. W. J. Mayo presented each of them a handsome gold-headed cane, paying, in his presentation remarks, his high personal tribute to each of them.

The Association's memorial address was

printed on the program of the meeting, and we are glad to give it herewith in full:

The Southern Minnesota Medical Association honors itself by honoring two of its most worthy veterans—Dr. James, of Mankato, and Dr Merritt, of St. Peter.

New York State claims them as her sons, but it is Minnesota that has been enriched by the gift of the exemplary zeal, courage, and perseverance of practically their whole professional lives.

Our guests of honor, who are today in the active exercise of their profession, were ushered into life when medicine was a meagre and struggling science, fighting for existence in the free-for-all, which was the watchword and the actual condition in the young republic. Morton had only opened his "Inn of Rest" for the suffering, and the American Medical resolved itself into an association when the boys were in their first year. Oliver Wendell Holmes had written his epoch-making paper only three years before they saw the light. Dr. Merritt had been in practice fifteen years and Dr. James two less when Pasteur surprised the world with his work against hydrophobia; and they were both gray-haired men before antidiphtheritic serum was discovered or the *x*-ray or radium put in the hands of the profession. It has been their privilege, not only to witness, but to take part in, the most stirring, the most revolutionary, and the most progressive period in the history of medical science.

The same year witnessed their birth—James in Greenwich on the banks of the Batten Kill, and Merritt in Danville. Merritt after some years moved to Iowa with his parents, but James remained until his manhood in his native state. Both boys conceived the lofty aspiration of serving mankind in the medical profession, and they reached the land of "Heart's Desire," Merritt graduating from Rush Medical in '72 and James three years later from New York University.

Though strangers to each other, fortune led them both to the same town, St. Peter, where Dr. Merritt took up general practice, in which he continues to this day an honored citizen and a successful practitioner. He has filled the position of coroner for a number of years, and served as health officer in the city of his adoption.

Through the strenuous life of the early days, he kept in mind that in the medical profession "not to go forward is to go backward," and has devoted a good portion of his time to study and postgraduate work.

He is a member of the County, State and National Medical societies, as well as the Southern Minnesota, of which he is the honored guest.

On reaching St. Peter, Dr. James took up institutional work in the government hospital, a service for which he had received careful training at Blackwell Island immediately after his graduation. He served here honorably for fifteen years, when he resigned to devote himself to the specialty of eye, ear, nose, and throat. His good judgment, delicate touch, and steady hands admirably fitted him for this work and today he ranks with the most skillful in his chosen field.

The talent of Dr. James is recognized in his affiliation with both the Minnesota and the American Ophthalmological and Oto-Laryngological Societies and his Fellowship in the American College of Surgeons. He is also a member of the County, State, and National Medical Societies.

For over forty years these men have been torchbearers in the science and the ethics of medicine; nor have they ever dimmed its luster by one unseemly act.

Good men, good citizens, and good doctors!

Men who never turned their backs, but marched breast forward,
Never doubted clouds would break;
Never dreamed, though right were worsted, wrong would triumph;
Held we fall to rise, are baffled to fight better, asleep to wake.

Prossit, prossit, James and Merritt, ad multos annos.

BOOK NOTICES

International Clinics. A Quarterly of Illustrated Clinical Lectures and Especially Prepared Original Articles on Treatment, Medicine, Surgery, Neurology, Pediatrics, Obstetrics, Gynecology, Orthopedics, Pathology, Dermatology, Ophtalmology, Otology, Rhinology, Laryngology, Hygiene, and Other Topics of Interest to Students and Practitioners. Edited by H. R. M. Landis, M. D., Philadelphia, U. S. A. Volume II, twenty-eighth series, 1918. Philadelphia: J. B. Lippincott Company, 1918.

To this issue, there are twenty contributors, four of whom are from France.

E. W. Archibald discusses in widest way pancreatitis.

E. V. L. Brown discusses keratitis and iritis from focal infection.

Larkin and Levy discuss urea and nonproteid nitrogen in blood as related to kidney lesions.

There are four clinics with various topics from J. W. Markoe, Dean Lewis, J. B. Blake and Charles J. White.

The psychologic handling of the tuberculous patient is discussed by Charles J. Minor, and early diagnosis of syphilis of the nervous system is treated by John Elind, and other subjects are handled by able men.

Several other articles, each with excellencies only to be gotten in their careful study, complete the valuable contents.

The reader will miss nothing of value found in former volumes when using this.

—Haggard.

Surgical Clinics of Chicago, Vol. II, No. 4, (August, 1918), 202 pages with 110 illustrations. Published bi-monthly by W. B. Saunders Company, Philadelphia. Price per year, paper, $10.00; cloth, $14.00.

This volume contains many practical suggestions that are valuable to the general surgeon in his treatment of fractures, skin-grafting, and needles in the hand, besides many other interesting subjects.

The clinical lecture on the acute abdomen and that on fractures constitute two of the best chapters in this number.

The different articles are well illustrated.

—Robitshek.

NEWS ITEMS

ANNOUNCEMENT

THE JOURNAL-LANCET believes it is both expedient and wise for physicians who have been in the service of the Government, at home or abroad, to drop their military titles upon their return home; and hereafter in these columns we shall write and speak of physicians as Doctors, not as Lieutenants, Captains, Majors, or Colonels.

Military titles for physicians were made necessary by war conditions; civil conditions strongly suggest their abolition.—THE EDITOR.

Dr. C. E. Gates has moved from St. Paul to Anoka.

Dr. B. F. Bohling, of Sandstone, is home from France.

Dr. R. A. Schnacke has moved from Madison to St. Paul.

Major A. T. Mann has been transferred to Fort Snelling.

Dr. H. D. Lees, of Esmond, N. D., has moved to Nevada, Mo.

Dr. J. M. Hall, of Minneapolis, has returned from his army work.

Dr. F. G. Lagerstrom has moved from Lindstrom to Minneapolis.

Dr. Newcomb S. Smith, retired, of Rapid City, S. D., died last month at the age of 79.

Dr. W. M. Empie has been re-elected school physician at Virginia.

Dr. Karl C. Wold, of St. Paul, has returned from army medical service.

Dr. W. R. Crowell, of Lamberton, has returned from Camp Zachary Taylor, Ky.

Dr. Wm. Lerche, of St. Paul, returned home last month, and resumed practice.

Dr. H. A. Beaudoux of St. Paul has been invalided home, and is now at Ft. Snelling.

Dr. C. E. Fawcett, of Stewartville, is home from army service and has resumed practice.

Dr. W. F. Keller, of Sioux Falls, S. D., has returned from Camp Grant, and resumed practice.

Fairview Hospital of Minneapolis graduated its first class of nurses, ten in number, last month.

Lieut.-Col. T. M. Gentry, of the regular army, has been appointed head of the general hospital at Fort Snelling.

The Minnesota legislature will probably pass very stringent laws as to prescribing narcotics by both physicians and dentists.

Dr. F. A. Gawn, who has been connected with an aviation training school in St. Paul, has resumed his practice in Duluth.

The salary of the Health Commissioner of Minneapolis, Dr. H. M. Guilford, has been increased from $3,600 to $4,000 a year.

Dr. W. J. Mayo has been re-appointed by Governor Burnquist a member of the Board of Regents of the University of Minnesota.

Dr. F. C. Wheat, of Minneapolis, has taken over the practice of Dr. C. M. Storch, of Anoka, and Dr. Storch has moved to Minneapolis.

Blue Earth and Wadena Counties have recently formed public health organizations.

Mahnomen County will make a survey of its handicapped, neglected, and delinquent children, with a view to giving them assistance and relief.

St. Luke's Hospital of Duluth graduated a class of seven nurses last month. Why not "seventy times seven" to meet the community needs?

The American Red Cross announces that over 200 American nurses died from influenza contracted in the influenza wards of army hospitals.

The hospital at Tracy, for many years conducted by Mrs. Summers, has passed into the hands of Drs. Valentine and Hoidale, of that city.

Capt. A. S. Hamilton, of Minneapolis, has been transferred from Mineola, N. Y., to the Walter Reed Reconstruction Hospital at Washington, D. C.

Dr. Albert Fritsche has completed his internship at Asbury Hospital, Minneapolis, and has become associated with his father in practice at New Ulm.

Dr. M. Sullivan, of Adrian, where he has practiced for many years, has temporarily retired from practice, and will spend some months in Minneapolis.

Major E. M. Jones of St. Paul has been made chief of the general surgical section of the Walter Reed Reconstruction Hospital of Washington, D. C.

The Minnesota Public Health Association has over eighty county nurses at work in the state. Special work is done among school teachers and school children.

Two of the men who assaulted Dr. A. P. Roper, of Glencoe, because of his Red Cross activities,

have been convicted, and will no doubt receive severe sentences.

Dr. John Watson has charge of the practice of Dr. H. P. Sawyer, of Goodhue, who is taking a rest after strenuous work required by the influenza epidemic.

Dr. J. F. McClendon, of the Medical School of the University, has returned from France, where he was working on the rationing problem of American soldiers.

Dr. C. L. Sherman, of Luverne, has been appointed county physician by the commissioners of Rock County, and Dr. E. J. O. Thorson was appointed coroner.

Drs. A. A. Law and S. M. White, of Minneapolis, who were with the University Medical Unit (No. 26) in France, have returned to the city, and resumed practice.

It is said that an interne in the St. Paul City and County Hospital amputated his own leg under local anesthesia. "Every man his own surgeon," is a good slogan.

While the influenza epidemic is decreasing in most parts of the Northwest, there are grounds for fear that it may increase in the form of a flare-up in some of the larger cities.

Dr. W. A. Matlick, of Buffalo, N. Y., is now at the head of the Aitkin-Crow Wing Tuberculosis Sanitarium at Deerwood. Dr. Matlick has been connected with other institutions in Minnesota.

Dr. Angus Morrison, of Minneapolis, is expected home soon. Dr. Morrison has been consulting neuropsychiatrist to Base Hospital No. 26, and to the Allied Hospitals' Association with this unit.

Dr. Jonas M. O. Tufty, of Duluth, died last week of heart failure at the age of 62. Dr. Tufty was a graduate of the University of Christiania, and had practiced in Duluth thirty-three years.

Dr. T. J. Schlesselman, of Good Thunder, has sold his practice to Dr. M. S. Bringham, of Boston, Mass. Dr. Schlesselman will move to Mankato, and will specialize in eye, ear, nose, and throat work.

Two members of the board of managers of St. Luke's Hospital of Duluth have been on an extended eastern trip to inspect hospitals for suggestions in the enlargement of St. Luke's hospital building.

The Blue Earth County Medical Society, at its recent annual meeting, took steps to stop illegal practice in that county. Dr. J. H. James was made chairman of a committee to take the necessary legal steps.

Red Cross nurses who have been disabled in the service of the Government are entitled to the re-educational privileges of the Federal vocational schools recently organized, or to be organized, for soldiers.

The Board of Education of Minneapolis strenuously objects to having the medical inspection of the public schools done by the city health authorities. The board wants its own health officers in charge of the work.

Dr. W. H. Witherstine, of Grand Forks, N. D., is home from army service, and has resumed practice. Dr. C. E. Hunt, who has been assisting the firm of Drs. Witherstine & Wilson, has become associated with the firm.

It is estimated that 50 per cent of the physicians of Minnesota entered the service of the Government for war work of one kind or another. Probably other Northwestern states make even a better showing than Minnesota.

Dr. W. J. Richardson, of Fairmont, who was recently elected vice-president of the Southern Minnesota Medical Association, is said to be the oldest practitioner in Martin County. There is still room at the top, or near it, for the old men.

Dr. J. G. Parsons, of Sioux Falls, S. D., in a recent address before a men's church club in that city, said that while the physician of today may not be identified with any religious organization he is, religiously and ethically, a religious liberal.

Every county in Minnesota has money due it from the Minnesota Public Health Association, and some physician in every county should make it his business to get that money and also to get the help of the Association in expending it wisely.

Dr. Elijah S. Kelley, of Minneapolis, an early practitioner, died on Feb. 10 at the age of 72. He came to Minneapolis a half century ago. He served the city as health commissioner and police surgeon, and Hennepin county as county physician.

Dr. Minta Kemp, of Mount Pleasant, Iowa, has accepted a position on the staff of the Minnesota State Hospital at St. Peter. Dr. L. E. Pennington, who entered the army from State hospital work in Iowa, has also joined the staff at St. Peter.

The Physicians' Exchange of the Twin Cities, which has been very helpful to its members, was temporarily closed in January. It has now resumed work under the management of Mr. C. J.

Hoard, with its former manager, Mrs. Nellie Grant Christenson, in charge of the phones.

The success of Clinic Week in Minneapolis last year led to an almost unanimous decision by the physicians and surgeons who gave clinics to make Clinic Week an annual affair. It now seems to many of these men that the changed conditions make it unwise to undertake the work this year.

The Sheyenne (N. D.) Valley Medical Society held its annual meeting at Valley City, N. D., last month, when the following officers were elected: president, Dr. R. D. Benson, Hannaford; vice-president, Dr. C. E. Spicer, Valley City; secretary-treasurer, Dr. S. A. Zimmerman, Valley City.

A bill has been introduced in the Minnesota legislature to levy a tax of 1 mill to create a special fund for hospital purposes. While the measure applies only to cities of the first class (Duluth, St. Paul, and Minneapolis), its passage would soon be followed by a bill applying to all cities. It's worth while.

Miss Lydia H. Keller, secretary of the Minnesota State Board of Nurses' Examiners, urges that nurses in military service be given such military rank as will best protect them and enable them to do their work more efficiently. She is likewise strongly in favor of improved standards in nurses' training schools.

The proposed all-year-round plan for the Minneapolis schools stirred up an opposition so acrimonious that the Board of Education abandoned it. An opposition from medical men of the city had much to do in developing the opposition to the plan, and perhaps a misunderstanding of the plan increased the opposition.

The bill in the South Dakota legislature to make the medical examination of all school children compulsory has been amended so as to make such examinations *optional*. This is equivalent to striking out the "enacting clause," which means that the children of Christian Scientists may pass on to their associates all infectious diseases.

Dr. W. J. Mayo, in his address at the Southern Minnesota Association, pointed out very clearly, and, it should be added, very authoritatively, that much, indeed, very much, of the work done by the Germans and passed off by German propaganda as original, was in no sense original with them, but only copied, and not always improved, from men of other nations.

A bill has been introduced in the House of the North Dakota legislature governing the sale of patent medicines through license, and absolutely prohibiting the advertisement of cures for cancer, consumption, deafness, diabetes, paralysis, Bright's disease, fits, epilepsy, locomotor ataxia, rupture (except by surgery), and all venereal diseases.

The Northfield Hospital Association has agreed to turn over to the city of Northfield its hospital building, equipment, and good will whenever the city desires it in order to obtain a large bequest recently made by the late George W. Murphy in his will with the condition that the city will agree to erect and conduct a modern hospital, which the city will do.

Base Hospital No. 26, generally known as the "University Unit," because of the assistance given it by the University of Minnesota, and because of the number of University Medical School men on its staff, is said to have handled more than five thousand cases while it was at Allery, France, from June, 1918, to February, 1919. Dr. O. N. Klinger was the only member of the Unit who died in France.

Dr. George S. von Wedelstaedt, now of Los Angeles, but formerly of St. Paul, was given a column on the front page of the *Herald* of that city to advance the theory that the influenza is due to microscopic atoms of decaying human flesh suspended in the atmosphere, which have created a virus that is carried all over the world in the air, and causes the dread disease wherever it settles to the earth.

The tuberculosis sanatoriums of the Northwest are doing a valuable work, with far-reaching effects, by their clinics with patients outside of sanatoriums. The annual report of the St. Louis County institution shows that at the clinics conducted last year nearly six hundred patients were treated and given advice as to the proper care of themselves. Twelve hundred patients have been treated in the sanatorium since it was opened, in 1912.

A newspaper report comes from Butte, Montana, that the Silverbow County Medical Society has rescinded a recent increase in the fee bill recommended to its members; and the reason given for this action is the action of labor unions in asking the County Commissioners to employ enough physicians to treat the public free, and they also obtained the introduction of a bill in the Montana legislature criticizing the increase in physicians' charges.

One medical interne is wanted by the United States Civil Commission for Saint Elizabeth's

Hospital, Washington, D. C. The salary is $900 a year and maintenance. There are 3,000 patients and 800 employes to care for. Examinations of candidates for this position will be held on March 12, April 9, and May 7 in 482 cities of the country, including 21 Minnesota, 11 Montana, 14 North Dakota, and 18 South Dakota cities. The successful candidate is likely to be "some" interne.

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As will be seen from the accompanying illustration, the physician has only to break off the protective end cap, compress the bulb, and inject the contents into the barrel of the previously sterilized, and still warm, hypodermic syringe, and he is ready for administration. This does entirely away with the difficulties and annoyances presented by the glass ampul, the contents of which have to be melted, the neck to be filed and broken, the syringe needle inserted, and the contents removed, quite a little trouble being experienced in getting all of the contents into the syringe. Often, the glass ampul falls over, or slips from the fingers and breaks, or cuts the fingers, or small particles of glass get mixed up with the contents. All of this is impossible with the Collapsule Hypo-Fill container.

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VICTOR *X*-RAY PLATES

Mr. F. Lorne Pengelly, Sales Distributor of the Victor Electric Corporation, with sales rooms in the La Salle building, Minneapolis, wishes to call attention of users of *x*-ray plates to the Corporation's announcement on another page.

A new plate of Victor standard meets the wants of the most exacting röntgenologists, and it carries the guarantee to give perfect satisfaction; and, besides, it has decided advantages which commend it especially to men who are not trained experts in the use of *x*-ray plates.

Mr. Pengelly is always pleased to have users of plates call upon him for information of any kind. Even a few minutes spent with him will give almost any man new and valuable points in the technic of making *x*-ray pictures.

The La Salle building is on the corner of Marquette avenue and Seventh street, just a half block from the Donaldson building.

OCONOMOWOC HEALTH RESORT

It is a mistaken notion that any one of our excellent (many are not worthy to be called even good) sanatoriums, is the place to send any kind of chronic case, even if the character of the case seems to fit it for an institution under consideration. A sanatorium, like a physician, may do some kind of work and handle some cases admirably, and yet do poor or indifferent work along other lines. For this reason physicians should study sanatorium work as carried on in our leading institutions, and should visit them from time to time.

The above introductory remarks will serve to call attention to the Oconomowoc Health Resort (at Oconomowoc, Wis.), where Dr. Arthur W. Rogers, the resident physician in charge, has long been handling with marked success neurasthenic, borderline, and disturbed mental cases.

The physical conditions and surroundings consist of a thoroughly modern building and a large, handsome park, insuring all the home and the sanatorium comforts so much needed and appreciated by these patients. This institution depends upon the confidence of the profession to make its work a success, and it has the implicit confidence of all medical men who have sent patients to Dr. Rogers.

TWO CENTS FOR A FRESH-FRUIT DESSERT IN MIDWINTER

Local grocers are now offering a new type of gelatine dainty. The name is Jiffy-Jell. Each package contains a bottle of highly-condensed fruit-juice essence. Add boiling water to the Jiffy-Jell, then this fruit-juice essence, and you have a real-fruit dessert.

This fruit essence is made from the fresh, ripe fruit, and right where the best fruit grows. One little vial contains all the essence from half a ripe pineapple —just to flavor one dessert. Another little vial contains the condensed juice of 65 big Loganberries. So Jiffy-Jell desserts taste just like fruit-made dainties. Yet a package to serve six people or more costs only 12½ cents.

This low cost is due to the Jiffy-Jell method. They crush the fruit and condense it. Thus a little vial contains all the essence of considerable ripe fruit, saving transportation. You get the delights and the healthfulness of fruit, just as though you served fresh fruit. And it costs but a trifle—right in midwinter, when you need fruit most, and when fresh fruit is so high

Jiffy-Jell itself is a high-grade gelatine powder, ready-sweetened, in proper color, and acidulated. So you make the dessert in a jiffy by simply adding boiling water.

There are ten of these bottled flavors, and eight of them are fruits. One is mint flavor for making a mint jell. One is lime-fruit flavor for making tart, green-salad jell. Grocers say that the favorite flavors for desserts are Loganberry and Pineapple.

It is said that Jiffy-Jell with these true-fruit flavors is one of the greatest successes in the food line in some years. It has won millions of users already.

ELI LILLY & COMPANY

The prediction has been made that there will be among the civilian population for many months to come a high morbidity from pneumonia as an aftermath of the recent virulent and debilitating epidemic of influenza.

In anticipation of such a possibility, physicians will have their attention focused on ways and means of successfully combating the disease. For this reason, the studies of Dr. E. C. Rosenow of the Mayo Foundation on the protective power of partially autolyzed pneumococci (pneumococci treated in such a way that a large part of the toxic substance is removed) against pneumococcus infections, will be of interest.

The results obtained by Dr. Rosenow and his coworkers with the antigen in the treatment of over 200 cases of lobar pneumonia, apparently indicate that it exerts a definite beneficial action on the course of the disease, especially when given early, and strongly suggest the advisability and desirability of giving it a more extensive trial in order that conclusive evidence may be accumulated with respect to its efficacy.

Eli Lilly & Company with its usual acumen with respect to the needs and specifications of physicians have made this antigen possible by adding it to their biological list, under the name of Pneumococcus Antigen. It is marketed in 5 c.c. ampoule vials, each c.c. containing 20 billion partially autolyzed pneumococci. Pneumococcus Antigen is supplied through the drug trade and may be ordered by the biological number V 903. Further information concerning this product may be secured through Eli Lilly & Company of Indianapolis.

THE
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SURGICAL END-RESULTS*

By E. K. Green, M.D.,
MINNEAPOLIS

The ever-changing scenes of modern civilization pass before us in such rapid succession that our attention is so drawn to the spectacular and theoretically correct procedure that time does not permit us to consider seriously the end-results. I invite your attention this evening to the end-results in surgery.

Roughly speaking, modern surgery is about forty or fifty years of age; and we cannot but marvel when we think of what has been accomplished in that brief period.

Today we enter the abdomen, do extensive repair, remove offending organs, such as the appendix or gall-bladder or even carcinomata in favorable cases, and consider that failure to recover is purely accidental.

Probably the most remarkable report of the advance of modern surgery is that of Professor Duval of Paris, who reports that by the radical operation on the lung, the death-rate among soldiers having lung injuries was reduced from 65 per cent to 9 per cent. Viewing the subject of surgery as a whole, however, we must not only take into consideration the reports of eminent surgeons and their clinics, which constantly appear in the literature, but we must also consider the work of the reckless and incompetent surgeon, who may have a large practice but never makes reports. Then, too, a large number of operations are done each year by the occasional operator who may be ever so honest and careful in his work, but who has never had the opportunity to acquire any special preparation. All these must be reported in the general survey of the subject.

In surgery the patient is subjected to the dangers of an anesthetic and the dangers of unexpected accidents occurring during the operation; and every surgeon of experience knows full well that occasionally in a simple case the patient does not survive the operation, and, furthermore, he must admit, if he is honest, that in many of his cases the patients are not improved.

In order to obtain the best results in surgery, there are three points which we have to consider: first, the surgeon; second, the correct diagnosis; third, careful records of diagnosis, operative technic and convalescence.

First, the surgeon: Of paramount importance, he must be a man of upright character and absolute integrity. There is probably no one thing that has brought the practice of surgery into greater disrepute than the commercial surgeon. The honor of our profession requires that the welfare of our patients should come first; and, because of the fact that some do not follow the proper professional standard, we have tried to maintain that standard by rules and regulations of medical schools and by suitable laws. At present the first-class medical schools require an academic as well as a medical course, and, furthermore, before the diploma is given, a year's internship in some hospital must be served. In addition, most excellent postgraduate courses are offered to those who realize the importance of

*President's Annual Address, presented at the annual meeting of the Hennepin County Medical Society, January, 1919.

such courses and are able financially to take them. So far as the state law is concerned, the post-graduate work is not required, but any man who has passed the state board examination is protected legally in performing the most technical and difficult operations, the same as the man who has spent years in preparation.

To outline the life-work of a surgeon, it would seem, approximately speaking, the first part of his career, say up to thirty-five or forty years of age, should be spent in mastering his anatomy, studying pathology, both gross and microscopic, and in acquiring technical skill. That is the time of life when habits are most easily formed. The dissecting-room and laboratory should be followed until he has not only passed the examinations, but until he is absolute master of the subjects. During this time, if he has had the proper association in assisting and working with an older surgeon, he has prepared himself in such a way that he is safe and competent to do major surgery. Then beyond the age of thirty-five or forty we may depend on him for the surgical judgment which is necessary to give his patients the care and treatment which they rightfully deserve.

It is indeed gratifying to note that at present many young men who have the ambition to become surgeons are associating themselves with men of reputation and ability for the sake of getting a thorough, well-grounded surgical education. Unfortunately, the question of finances and a livelihood enters into the problem in such a way that it is difficult for a surgeon to plan his career purely on a professional and scientific basis. The physician at the age of twenty-five or twenty-eight, when he has finished his college and hospital training, unless he is a man of means, is usually broke or greatly in debt. His first thought is to square himself with the world and, to a certain extent, make himself independent. If he is married, unless he is particularly fortunate, it takes five or ten years in general practice to clean up accounts and get started.

Heretofore the man who intended to become a surgeon has begun operating right from the start and, while in general practice, has also been doing herniotomies, appendectomies, etc., many times with a hospital interne or nurse for an assistant; and, by the grace of God, most of his patients have done fairly well until, finally, he has turned out to be a surgeon with good technic and good surgical judgment. Where has he acquired his education? By practice on the ignorant, trustworthy public.

Right in this line the surgeons of recognized standing carry a double moral responsibility. On the one hand, it is our duty to see that the men who are capable and desire to become surgeons have the proper opportunity, that their income, which rightfully comes from the surgical specialty, is sufficient to live upon during their period of preparation, that their opportunities for work are such that they can methodically and scientifically plan their course in such a way that the best results can be obtained. On the other hand, it is our duty to establish the proper relationship with the other specialists, and particularly the general practitioner, in such a way that their work may clearly be seen to be equally as important as ours, that their standing in the profession shall be as much to be envied as ours, and that by the proper education of the public, as well as the profession, they may receive the full recompense for their labors. Too often when a case is referred to the surgeon, many times considerable time investigating and making a diagnosis having been spent, the surgeon immediately becomes the big man in the case and is very apt to ignore his brother physician when deciding the size of the fee, and no real effort is made to protect him in his fee or to give him due recognition for his work. As a consequence the doctor referring the case feels that out of sheer protection to himself and safeguarding his own income, he must try to do the work himself, even though he would prefer not to do it. This is a real problem, and the writer is unable to offer a solution at present.

We are all human. Since the American College of Surgeons, the Clinical Congress of Surgeons, and now the various hospitals, are requiring that the surgeon sign a pledge not to split fees, which is perfectly correct; since there is no plan whereby most of the men who desire to become surgeons can make a suitable living during their long period of preparation, except in general practice; since as yet we surgeons have no ethical way for the man referring a case to be properly paid for his work in proportion to the surgical fee; since the laity is not sufficiently educated to see the difference between the recognized surgeon and the occasional operator; and, finally, since we are protected alike legally—just so long we may expect surgery to maintain its present status and the general end-results will not be materially improved.

True, in all lines of work there is the human variation in ability and skill, and some are able to accomplish much more than others; but the

CHART NO. I

ABDOMINAL

OPERATIVE TECHNIC AND WOUND RECORD

Degree 1, 2, 3, 4 Room Date 12—5—18

No. 463 Name Mrs. Smith Sex F Age 25

DIAG. PRE. OP.: Appendicitis Post. Op.

Prev. Cases in Room Clean 2 Infected

Op. Room Force: Surgeon Dr. J. Asst. Dr. T. Nurse Miss B.

Anesthetist Miss P. Anesthetic G. O. E.

Colds Infection

Gloves Perfect Damaged Changed

Patient Normal Cold Recent Infections Temp. 101°

Anemic Jaundiced Septic Thin Medium Fleshy

OPERATIONS:

Additional Operations

TECHNIQUE: McBurney Median Rectus Special

Exposure Easy Normal Difficult Hemorrhage 2 Trauma

Catgut Amount Plain Tanned Chronic Linen

Catgut or Linen Purse String Cautery Sponge-count Correct

Drains Deep Tube Penrose Gauze Split Tube & Gauze Gall-bladder

CLOSURE: Easy Normal Difficult Satisfactory Unsatisfacory

Peritoneum Single Double Plain Chronic Interrupted Continuous

Muscle Single Double Plain Chronic Tanned Interrupted Continuous

Facia Single Double Plain Chronic Tanned Interrupted Continuous

Silkworm 3 Clips Catgut

Wound Oozing Dry Dead Space

Known Infection Abcess Gut Opened Possible Infection

REMARKS:

Appendix retrocecal

NOTE.—Underscoring words serves as check-marks.

CHART NO. II

Reverse Side of Chart No. 1

Chart No. 3 for Patient Mrs. Smith

Date	Dresser	Condition of Wound	Treatment

Summary of Convalescence Normal Acquired Infection

Gas Pains, 2 Morbidity, 2 Days in Hosp., 20

rule still holds that the man with one purpose and one ambition is much more likely to succeed and do his work well than the one whose attention is divided. This principle applies in surgery, as well as in all other lines of human endeavor. So, if we are to take into consideration the welfare of the patient as to end-results, the surgeon of experience, who has spent long years of preparation and has had his surgical judgment thoroughly established, certainly is the man from whom we can expect the best results.

SECOND: DIAGNOSIS

Modern medicine and surgery have made in the last fifteen or twenty years some very remarkable strides in regard to diagnosis. The modern laboratory, with its tests and detail, has given us some very valuable data, in fact at times there has been a very great tendency to put too much dependence on the laboratory. We often are not willing to follow the old tried and staid methods of taking histories and making complete, thorough physical examinations; and, as a result, we come to grief because, when we depend on the laboratory, though it is good and valuable in its place, it is not infallible. The question of diagnosis with the surgeon is extremely vital. In internal medicine, when the cases are treated symptomatically, many times the diagnosis is not so important. Furthermore, with the giving of medicine there is not the radical disturbance of physical function which we have in producing profound anesthesia and opening the abdomen, with the trauma and loss of blood which many times occur. Therefore, before operating, every possible means should be used to make a clear and positive diagnosis.

What do we see in practice? With the most meager data and extremely cursory examination, we subject our patients, for example, to the operation for appendicitis, and with what results? Dr. Charles H. Mayo makes the statement that one in six of all patients that are operated on for appendicitis do not have appendicitis, and are usually suffering from some other malady. Of course figures and exact records are hard to get, but with my own cases and my observation in the city of Minneapolis, I doubt if the surgeons of this city as a whole can show a better proportion than Dr. Mayo has stated It would certainly seem that with a record like that, with over 16 per cent of failures, or, I may say, worse than failures, more time for diagnosis and more care-

CHART NO. III

Name

	BATES	JONES	SMITH	APPENDICITIS
	475	470	463	No.
	F	M	F	Sex
	30	15	25	Age
Prev. Cases	1		2	Clean
		2		Infected
Gloves			x	Perfect
		x		Damaged
				Changed
Patient	x	x		Normal
				Cold
				Recent Inf.
			101	Temp.
				Anemic
				Jaundiced
				Septic
		x		Thin
			x	Medium
	x			Fleshy
Incision		x	x	McBurney
	x			Median
				Rectus
				Special
Exposure		x		Easy
				Normal
	x		x	Difficult
			2	Hemorrhage
	3			Trauma
Gut	x	x	x	Plain
				Tanned
				Chronic
	x	x	x	Linen
Drain			x	Tube
				Gauze
Closure		x	x	Easy
	x			Normal
				Difficult
			x	Satisfactory
				Unsatisfactory
Convalescence		x		Normal
	x			Acquired Inf.
			2	Gas Pains
	3		2	Morbidity
	28	10	20	Days in Hosp.

This chart is condensed, but shows how to correlate the other two charts for ready reference.

ful investigation before the abdomen is opened surely will tend to better end-results.

What is the solution? Probably the best solution we have at the present time is the group or the diagnostic unit. The Mayo brothers have given us a good idea of what can be accomplished in that respect. It is not necessary, however, to be as elaborate as they are in order to do good work. One of the most promising conditions we have at the present time is the good fellowship and hearty co-operation that exists in the profession, especially among the younger men. As a matter of fact it becomes necessary for us to work together if we are going to get the best results. The man who, for example, is perfecting his technic and developing his surgical judgment by constant operating, does not have the time, even if he so desired, to become familiar with all the modern and best methods of diagnosis in the various specialties. But if the surgeon, the internist, the pathologist, the röntgenologist the eye and ear specialist, and the cystoscopist, can all work together so that the patient, in coming to see any one of these men, can have the benefit of one or all of them in giving him the "once over," there can be no question but what a better diagnosis can be made. Here again the question of fees enters into the problem. The firm or corporation is the simplest arrangement, but men who have been independent all their lives and have formed definite habits relative to finances, do not take kindly to such revolutionary ideas. However, we cannot afford, because of financial difficulties, to defeat one of the most promising procedures in getting the best end-results.

In forming the group, the one man who merits our most careful consideration is again the general practitioner. We have, working with us, many men, who, through choice or from force of circumstances, prefer to make calls and act as the family advisor at all times in medical matters. When, on the one hand, we consider the various specialists who are constantly exploiting their work, and by various forms of legitimate advertising, if you please, are manipulating the medical and surgical business of the country in such a way as to secure most of the large fees. and, on the other hand, the rapid progress which is being made toward state and industrial medicine, the general practitioner seems to be cut off with the mere pittance of calls, which is not an adequate return for his work. In his desperation he tries to emulate his brother specialist, in order to get the fee, and, even though he has not had much preparation, until some sort of readjustment is made we certainly cannot be too harsh in our judgment.

THIRD: CAREFUL RECORDS OF DIAGNOSIS, OPERATIVE TECHNIC, AND CONVALESCENCE

This is a subject which demands very careful study. We have a few men who have worked

out very creditable systems of case-records. With outlines for history charts, blanks for urinalysis and blood-tests, diagrams for examinations, etc., when their records are complete they are able by indexes and crossed indexes to classify their work so that it is of value in the study of any particular class of cases. To my knowledge, however, the records of operative technic and convalescence have not been so carefully worked out. We have a number of stenographic reports of clinics which are extremely valuable, but these are voluminous and it is difficult to get the correlated end-results which we are after. How many surgeons can tell you quickly and briefly how many of their gall-bladder cases for the last two years remained perfectly clean; how many died; how many stitch-abscesses they have had in hernias, etc.? So far as I have been able to ascertain, none of the hospitals have their records correlated in such a way as to be of any advantage whatsoever to the surgeon. Whatever records of this kind they have are on the hospital charts, and while some of these charts are very voluminous and complete, yet the data which they contain are like the tablets of the ancient Egyptians,—much valuable information is there, but it is practically useless because of the time and work which is necessary to get it out. In keeping records one of the most important considerations is the time and trouble. After spending considerable time, I have worked out the following scheme, which, if carried out, is a positive method of correlating the records of operative technic and convalescence. The merit of this plan is its simplicity, its uniformity in catching the general detail, there is not much writing or labor connected with it, and it gives you what you are after. See charts herewith.

I fancy that, if such a record were placed in all the general hospitals, some of the surgeons would resent having their cases classified for general inspection, but I can not do better than to quote Dr. E. A. Codman, of Boston, in his "Study of Hospital Efficiency." He makes the following statement: "The really difficult thing about the end-result system is to induce the staff of any hospital to be willing to make a truthful acknowledgment of the personal part which contributes to the success or failure of the case. It is here that we meet the conflict between man's insatiable desire to ascertain the truth and his supposed necessity to deceive his fellowmen for the sake of his own self-preservation or ambition. In every hospital there are certain cases where the personal element is the cause of failure. The onus caused by the fixing of responsibility in such cases is so great that it really does bring up the question of his actual struggle for existence. Yet, if we all permitted this fixation of responsibility this onus would be pretty well distributed."

In conclusion, I trust I have not set the standard of surgery too high. My only purpose is to be just to the patient, just to the surgeon, and just to the entire medical profession. Our work is, primarily, a profession and a calling, and not a business; and the best end-result to our patient is our ultimate aim.

CONCLUSION

1. The surgeon should spend more time in preparation for his life-work.

2. The financial situation of the entire profession should be readjusted so that the unequal remuneration for profesisonal work should not exist as it does at the present time.

3. Methods of complete diagnosis should be established so that the patient may get the benefit of expert opinion in all lines and not depend on the judgment of one man alone.

4. An efficiency expert should be employed to work out the best records for diagnosis, technic, and convalescence, and to have them so correlated that they may be of practical use at all times.

5. Suitable laws should be passed to protect the surgeon, as well as the laity, the same as in all other lines of human endeavor. With such a standard of efficiency there can be no question as to the best surgical end-results.

PUBLIC HEALTH PROBLEMS AND THEIR RELATION TO THE GENERAL PRACTITIONER*

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The saving of lives and the prevention of diseases are the foundation upon which modern public health is built. The means by which these can be brought about are problems that confront every public health worker.

The experiences of the terrible world war have awakened an interest for the necessity of conserving health. People are beginning to realize, though slowly, that most diseases are preventable —that the lives of thousands of people who die annually might easily be saved if proper care be instituted.

The factors that are indispensable for an efficient health organization may be divided into three classes:

1. Appropriation.
2. Education.
3. Co-operation.

APPROPRIATION

The city of Aberdeen, for example, appropriates ninety-three cents per capita for fire protection, ninety-three cents per capita for police protection, and less than one-third of the above amounts (only thirty cents per capita) for the preservation of lives and the protection of health. And what is true of Aberdeen is true of most of our cities. Is not the saving of lives and the prevention of diseases as necessary and important as the protection against fire and by police? And yet people would never think of living in a city without such protection, but are practically indifferent as to whether or not sufficient appropriations are made to safeguard their lives and health. Proper appropriations, therefore, are absolutely essential for any efficient health organization; for how can we have a good diagnostic laboratory, for instance, without sufficient funds to run it, and without it a health department cannot perform its proper functions?

EDUCATION

Educating the public in matters pertaining to preventive medicine is the next problem that faces the public health man. This could best be accomplished with the co-operation of the general practitioner. He should insist on the ounce of prevention, educating his patients as to the importance of a frequent physical examination, not only when the patient is in a diseased condition, but when he is well, as a preventive measure against disease and premature old age. The people must be informed and made to realize that most diseases are preventable. They must learn the truth about the harmful effects of patent medicines and the injurious effects that usually result from self-drugging. It devolves upon us to arouse public sentiment and to stimulate an interest regarding public health measures, especially those concerned with preventive medicine.

The knowledge that we possess relative to hygiene and sanitation should be disseminated among the public, not in scientific journals, which they do not read, nor through public medical meetings, which they do not attend. Much better means of reaching the people are through public health nurses, school teachers, health exhibits, lectures, educational films, magazines, and the daily and weekly press. The daily press, to my mind, could be made an important factor in disseminating such knowledge on the prevention of infection as the public ought to know. The public wants to know it, should know it, and must know it if we are to reduce our mortality-rate, prevent epidemics, abort venereal diseases, and bring up a healthier and better generation. By presenting the facts to the public as to the preventive measures of diseases, much could be accomplished. If the people were educated as to the consequences, say, of gonorrhea and syphilis, there would be less sterility among men and women and fewer paretics and tabetics. However, before the general practitioner assumes the responsibility as a modern physician, capable of infusing knowledge of preventive medicine among the masses, he, himself, must revise his theories and views regarding modern health measures. It is a fact that the general practitioner still clings to old-fashioned theories regarding the modes of infection of diseases,—theories that are in distinct contradiction to our modern views of contagious diseases. Many physicians still believe, and even teach their patients, that typhoid bacilli live in the ashes of our backyards; that lack of fresh air causes tuberculosis; that dirt is responsible for many diseases; and that most diseases are caused

*Read at the 37th annual meeting of the South Dakota State Medical Association, at Mitchell, May 22 and 23, 1918.

by air-borne infections. We know by our study in bacteriology that the expired-air breath does not contain bacteria, that most bacteria die in the air, due partly to the lack of moisture and organic food necessary for their growth, and also to the injurious effects of light and sunshine, with the possible exception, of course, of the tubercle bacillus and the sporogenic forms of bacteria.

A physician whom I know, and whom I admire and respect for his general knowledge of medicine, related to me and firmly believes in the following statement: A patient of his in California who had scarlet fever wrote a letter to his friend in Maine. That letter was opened thirteen years after it was written, and the recipient of the letter contracted scarlet fever.

This, in the opinion of the physician named, was due to the presence of scarlet-fever germs transferred from the scarlet-fever patient who thirteen years ago had written the letter.

We now know that, apart from food,—such as milk, water, oysters,—and apart from the common house-fly, infection in the large majority of cases is due to direct contact with the infected person and also to the so-called "carriers" of diseases; that the secretions of the mouth, throat, and nose by the fine spray of moist droplets produced by loud talking, coughing, face-to-face conversations, and especially in sneezing, are the primary causes of most of our respiratory and other diseases. We also know that diseases like diphtheria, scarlet fever, influenza, meningitis, tuberculosis, and, probably, anterior poliomyelitis, are caused in these ways. These modes of infection are scientific facts,—facts and not theories.

In striving to eradicate diseases or reduce them to a minimum and conserve lives, the problem of poverty, for example,—that economic and social state in which persons have not sufficient income to maintain health and personal efficiency,—confronts every public health man, as well as the general practitioner. Whether we agree with Malthus, who attributes poverty to the fact that the population tends to increase more rapidly than the food supply and that it is the pressure of the population upon food, or with Karl Marx, who attributes poverty and human misery to the fact that labor is not paid a sufficient wage, that the capitalist appropriates an unjust share of the product of labor, leaving to the laborer just enough to maintain existence and reproduce, the fact remains that poverty is a problem not only to the social worker and philanthropist, but to the public health man and to the physician; for as long as we have people who are underpaid, overworked, and overcrowded in unsanitary dwellings, so long we shall be apt to have children of low vitality, disabled, and defective. While we must admit that here our society is undoubtedly at fault and social adjustment is necessary, and while we cannot establish ideals and elevate thoughts in the presence of filth, yet by educating the public as to the elementary principles of hygiene and sanitation much sickness can be prevented and many lives saved. To educate these people to the importance of general hygiene and sanitation is a problem that is most difficult to solve. The masses are altogether indifferent as to their general health and care. They are not imbued with a desire to know the facts concerning the frightful loss of infant life, so much of which could have been prevented if proper preventive measures were applied.

HEREDITY AND FEEBLE-MINDEDNESS

These are problems that should not be left to eugenics and social workers, but should be of interest to every physician and public health man. It is not my purpose to discuss their causes or Mendelism as applied to eugenics, but simply to touch upon the problem from the viewpoint of preventive medicine. It is a problem that confronts all of us. Much could be accomplished in the form of prevention if our physicians would make their voices heard in legislative bodies that something be done to eliminate or reduce to a minimum the propagation of the unfit, who fill our institutions, and overcrowd our prisons and arsenals. One "mistake" by Martin Kallikak, for example, has produced generations of imbeciles, idiots, criminals, prostitutes, alcoholics, and epileptics.

POLITICS

Politics and efficiency in health organizations are incompatible; they do not go hand in hand, and the experience of public health workers has proven that not only does politics hinder its development and progress, but may be the cause of the complete destruction of an efficient health organization. It is needless to say that men for public health offices should be chosen upon their training and capability only, and not upon merely political pull. This is a problem that should concern every modern physician, and our medical societies, both district and state, should give this matter proper consideration. In this way much of the political gain in public health would be eliminated.

CO-OPERATION

The success of public health work depends largely upon the co-operation of physicians, and demands:

1. *Early Diagnosis.*—This is of great importance, for often a mere "sore throat" proves to be diphtheria, and a so-called mild rash, scarlet fever; and, if they are not recognized in the early stages, the patient endangers not only himself, but also his neighbors, and thus becomes a menace to the community. Such carriers of infection are the causes of frequent epidemics and endemics, and it is often impossible to trace such sources of infection.

2. *Reporting Cases.*—It is a sad truth that physicians often, too often indeed, fail to perform their moral and legal duties in not reporting their cases of contagious disease to the department of health. This is a deplorable fact, and it is a frequent cause of friction between the general practitioner and the health officer. These are the men who are often responsible for the outbreak of various epidemics. It seems that a good many of our physicians, men who claim to be modern and progressive, do not perform their moral and legal obligations unless made to do so by legal statutes, etc. And even then negligence and favoritism are frequent causes for failure to report cases of contagious disease. This reflects upon their intelligence, to say the least, and it is discouraging to every public health man whose ambition is to build up an efficient health system.

VITAL STATISTICS

Failure of the physician to register births and deaths is another problem that needs solution. Proper registration of births and deaths is the only way whereby we can accurately study disease and its prevention. It is the essential basis for intelligent efforts to conserve infant life, not to mention the importance of its relation to property rights, heredity, illegitimacy, etc. The fact that our State Board of Health is not in charge of the registration of births and deaths simply goes to show that in matters pertaining to health we have much to learn from many of our neighboring states.

CONCLUSION

In matters pertaining to public health the influence of our physicians on medical legislation must be made to bear in our municipalities and in our state legislatures, as well as in the national branch of our government, and the solution of the problems involved should not be left in the hands of a few whose primary interests in public health are based on politics. Then, too, proper appropriations would be made, and it would be possible to carry out the functions of an efficient public health organization. Our physicians should take a greater interest in preventive medicine than heretofore, and abandon their views of yesterday, that most diseases are air-borne, and accept the views of today, that diseases in a large majority of cases are due to infection by direct or indirect contact, thus becoming the doctors of tomorrow. Education of the public is still the greatest factor in safeguarding the lives of and in the prevention of diseases among the people. Co-operation of the general practitioner with the health officer would not only bring about mutual understanding, but would serve for the betterment of the community and also of the nation.

DISCUSSION

Dr. Mortimer Herzberg (Vermilion): I have enjoyed this paper very much. There is only one point which I wished the essayist might have made stronger, and that is this, that the general practitioner should be made to understand by legal authority, if he cannot be forced morally to comprehend, his responsibility in this matter. The greatest difficulty that I have experienced, at least the thing that I see is giving difficulty and is frustrating largely the work which we are trying to do, those of us who are engaged in this work, is the indifference of the average practitioner to the care of his contagious or transmissible diseases and reporting the same, and to those precautions which will prevent the spread of the disease.

The average practitioner is, too frequently, under the influence of the family which he is treating, and in various ways will condone many practices which he knows not to be right, in order not to make trouble for the family. I believe, under those circumstances, and when those instances can be detected, the greatest amount of pressure should be brought to bear upon such a man by those who can bring such pressure to bear. I believe that men who have been repeatedly found guilty of such practices should be disbarred from the practice of medicine in the state or city or wherever it may happen to have occurred.

For instance, this has come to my notice within the last week. There may be an explanation for it, but if so far I have not been able to find it. In one of the larger cities of the state there was an epidemic, or a partial outbreak, of diphtheria in an institution. Most of the cases were cleared up bacteriologically One case remained persistent. For a while they had no cultures in this case. Then all of a sudden the patient turned up, but in a different city. How in the world that case of diphtheria could be transmitted through the state under our present regulations is more than I can conceive.

It seems to me that where a condition of that kind exists there is something wrong, and, as I have said, I believe the screws should be put more firmly on a number of practitioners, and they should be impressed more strongly with their responsibility in regard to public

health, than has been done in the past. Education, appropriation, and all those things are necessary. The public is only too glad to get education. Appropriations will follow rather readily when the public becomes interested, and is shown by the general practitioner that these things are so, as some few of us happen to know already.

Dr. Park B. Jenkins (Waubay): We have in South Dakota what is known as the community system of health administration. Each county has several district organizations of its own, and those men who have been identified with health work in this state fully realize that we are in a pioneer stage.

Before we can do very much to overcome the problems of the county health officer, we shall have to reorganize the state department. Our appropriations have been small, and our work has been correspondingly undeveloped. It will be necessary for us to have an appropriation, and, I think, we shall get one sufficient to divide the state department into divisions. We should have a division of sanitation, a division of medical licensure, a division of epidemiology, and a division of child welfare, and we should have a division of vital statistics, and should have a man at the head of each division who is trained in that special line of work. When we acquire all of that we shall be in a position to stand up with other states which are properly financed and better organized than we are.

It is a well-known fact that a health officer, if he discharges his duties, is often looked upon with contempt by the people whose health he is trying to protect. He is handicapped by criticism, and his efficiency is curtailed by the pernicious activities of the people he is working for.

Probably one of the greatest problems in health work is the failure of physicians to report their contagious diseases. A physician is often a very busy man, and he neglects to report those cases that are brought to his attention. The legislature of 1917 amended the Medical Practice Act to include the refusal or neglect to report cases of contagious or communicable disease as unprofessional conduct, and a physician guilty of unprofessional conduct can be called before the state board to show cause why his license should not be revoked.

Probably one of the most annoying problems is the so-called medical cults that are flourishing,—Christian science, chiropractic, neuropathy, etc. They lack the fundamental education to enable them to diagnose disease. Contagious diseases are not reported, and are spread, and the proper health authorities have no record of such diseases.

In this connection I wish to state that it has been my privilege to attend the last three legislative sessions, at which times I have endeavored to defeat their activities in state legislation; and, basing my opinion upon observations made at those times, I believe that the State Medical Association should direct its activities toward the establishing of a common educational standard. I believe that the chiropractic, the allopath, and the eclectic, or any member of any school of practice should pass a common examination, which should have the same standards for all. It is certainly an anomalous situation that requires a regularly qualified practitioner to possess a high-school diploma, and to have two years of collegiate work, and four years' instruction in a medical institution, and then to allow some other school of practice to obtain State recognition upon a mere pretense of believing in this or that fad.

President Koobs: I believe the crux of the matter of getting improved conditions in public health work depends upon our willingness to instruct the laity. When the physicians in this state as a body are ready to act as a bureau of information, as I suggested in my presidential address, and get busy and talk, in season and out of season, and will write about it enough so that the people will know what the conditions are, and what will be favorable to them, how they will be benefited, etc.—then the rest of the physicians who have not done this will be made to wake up. They will be required to do the things that are right and proper in the way of health protection, and then there will be no trouble in getting proper finances for public health measures.

I believe that we have no committee of greater importance than the Committee on Public Health and Education. As I said, I do not believe there is more important work in connection with public health than the education of the public, and it must be done by us. We must take an active interest in this, or we shall never accomplish anything.

Dr. Holtz (closing): I will simply say that I agree with the President, that we must educate the public; but our doctors also must be educated. That is just as important. If they do not change their ideas about some of these things, the education of the public will not be worth very much.

I may not be in order, but this is the last session of the meeting, and Dr. McCauley has asked me to call attention to a certain matter. We are trying to pass a compulsory vaccination law against smallpox, and we have the co-operation of the superintendent of schools and of some members of the board of education. We expect to have a fight on it. One member of the board is a Christian scientist. I do not know how much influence she may be able to enlist. I appeal to you, and ask that you pass a resolution favoring a compulsory vaccination law, and when we go to the board of education and present a resolution from the State Medical Association, we will have that much more chance of getting the law passed than if we go before them without any such backing.

THE TRAINING OF THE MEDICAL SPEECH SPECIALIST*

By Walter B. Swift, A.B., S.B., M.D.
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This paper is published because the problem was presented, from a different viewpoint, in the Oration in Medicine before the South Dakota State Medical Association at its last annual meeting and published in The Journal-Lancet *of October 1, 1918. The treatment of the subject in this paper is in nowise controversial.* — The Editor.

I propose in this paper to consider the training necessary to the medical speech specialist, to take a perspective view of the education which would be the equivalent, for his field, of that which is considered necessary to specialists in the eye or in the ear. In addition to this I shall outline those other requirements which the novelty and the unparalleled extent of this field seem to me to demand.

The medical specialist usually passes through at least four stages of training: general medical training, general medical experience, special medical training, and special medical experience. The first two stages give him facility in general medical diagnosis; the second two stages acquaint him with the minutiæ of knowledge related to a restricted field. If he expects to teach, to write, or to do research work, a general non-medical education should precede all four. Now, since the field of speech is incontestably somewhat larger than that of either the eye or the ear, a somewhat wider education and a somewhat longer period of preparation and experience are demanded by it. It is clear, at any rate, that the speech specialist should have at least as broad an education as the specialist in these other fields. If he is to rank as their equal he must pass through the same four stages of preparation. It will be well, then, to consider these stages in their order.

GENERAL EDUCATION

Before taking up this medical training, however, I should like to say a word about the importance of the general college education to the student intending to enter the field of speech. The value of this preliminary work is unquestioned, and need not be argued here. I am concerned with a more precise and practical matter —with the nature of the work that such a student should pursue in college. A great deal of his time should be given to psychology. This is obvious, for the reason that no one can understand the working of the mind in connection with speech without a knowledge of psychology. Fifteen years ago I should have recommended study with that famous group of philosophers and psychologists who were then at Harvard,—James, Royce, Palmer, Santayana, Yerkes; but these men are now not there. Wherever he does his work, the student should not abandon the study of psychology until he has had experience in advanced laboratory work. The rest of his time in college may be spent in the study of some other science, in history, and in English, together with the foreign languages necessary for medical work.

It has been said many times, but can never be said too often, that a college education is nearly, if not quite, essential to success in medicine. This is peculiarly true of the speech specialist. It is not merely that without the college training he lacks a broad foundation for his scholarship and for literary contributions to the field of his interest; he also lacks the mental training and mental capacity to be gained only through long-continued study. He lacks the key to literature and to the education of the past which he will certainly find indispensable in his later work.

TRAINING IN ORATORY

Somewhat less general than the training to be gained in college and almost, if not quite, as important is the highly desirable work in oratory or dramatic art. One must be very careful in his use of these terms, for they have been grossly misinterpreted and degraded by impostors and charlatans. The dramatic training to which I refer, and to which alone I should ascribe any value for the purposes of the speech specialist, is that which requires the devotion of one's whole attention and energy for a considerable space of time. This sort of training is fundamental, and gives the student a permanent capacity, as well as a real equipment, for speech-correction. Besides training his own voice and speech, and thereby enabling him to train those of others, oratory illustrates mental capacities, mental states, and emotional attitudes, thorough understanding of which is absolutely essential to any one who has to do with the functions of speech. I consider, then, that the study of oratory is necessary to

the thoroughly equipped speech specialist. I would recommend that this study be not done in a department of public speaking which is conducted in conjunction with some large school or university, for in these places the methods used are usually superficial and external. It is much better to do this work in one of the colleges of oratory which give courses lasting two or three years and which develop from within, through the processes of oratorical delivery, the latent powers and capacities of the student's mind. It is obvious that those who have had this training can do vastly more in speech-correction than those who are without it.

SPECIAL SCIENTIFIC EDUCATION

Considering that the field of speech is almost entirely untrodden and uninvestigated, it would be well to train our speech specialists in scientific methods of research. This end can best be accomplished by concentration, perhaps during the college course, upon some science. For the reason that the science of physics can tell us more than any other about the phenomena of speech, I should recommend special attention to this science. The most valuable contributions to the study of the voice are being made today by a professor of physics. A mastery of the apparatus of physical investigation is necessary to the speech specialist who would equip a scientific laboratory for speech research. Thorough acquaintance with the methods of scientific tabulation, with the working of the timeograph, the sonograph, and the dictaphone, is also necessary, for without the scientific use of these instruments and the ability to interpret their registrations no accurate work can be done. For these reasons, together with others too obvious to mention, I recommend a scientific education, if possible, leading up to the degree of Bachelor of Science, as highly desirable.

GENERAL MEDICAL TRAINING

No one is likely to question the necessity of medical education to the speech specialist. Many speech defects have their seat in medical etiologies, and find their solutions only in the medical background. On the one hand, it may be observed that speech will certainly be an important avenue of medical diagnosis in the future; and, on the other hand, it is clear that contributions to medical science which have to do with speech can be made properly only by those who have adequate training in medical science. Without this training one's work in speech must necessarily be superficial, since it must leave largely out of account the anatomy, the physiology, and the neurology behind all functions of speech. Those who have not this training may indeed do excellent work as teachers and trainers, but they must always stand in relation to the medically trained specialist as the nurse stands to the physician.

GENERAL MEDICAL EXPERIENCE

All medical men know that medical study without medical experienec is of doubtful value. A general hospital experience lasting one or two years should, therefore, follow the medical course. This gives the student experience in diagnosis of general medical cases and in the treatment of patients, as well as opportunity to observe different forms of diseases in their beginnings and course. Furthermore, it teaches him the value and the technic of post-mortem examinations. Such observation and experience as this will save him from many a pitfall in later years. It will show him the influence of disease upon the speech mechanism, and without a knowledge of this he cannot but go astray.

SPECIAL MEDICAL TRAINING

Specialists in the eye and in the ear pass through three stages of preparation at least. After their general medical experience they study their specialty at home Secondly, after years of study at home, they make further and more exhaustive study abroad This study might now be done in some American cities. Thirdly, they establish clinics in their specialties and teach in these clinics. Without question, if he is to attain equal honor and efficiency, the speech specialist should do likewise.

In that part of the work which may be done at home anatomy is a main item. For the speech specialist this includes the anatomy of the mouth, nose, and throat, the nervous anatomy, and the anatomy of the brain. The study of the latter two should precede that of the first. It might be wise, then, to begin with the clinical phases of neurological work. I should set my would-be speech specialist on service in a nerve department for a year or two. This would acquaint him thoroughly with the diagnosis of different forms of disease incident to the nerves. After or during this period I should have him study nerve anatomy, brain anatomy, and the neuropathology of the same. This work cannot be so well done in America as abroad. There is no way of learning thoroughly the anatomy of the nervous system except by actual sectioning and staining, and this work should be done by the

student himself. At this time, also, he should gain a first-hand acquaintance with the external speech mechanism. After the study of the nervous system, and particularly of the spinal cord, the student should take up, through sectioning and staining, the study of brain physiology and anatomy. Then he should proceed to the study of the pathology of the nervous system, and this should be followed by clinical work in neurology and psychiatry. Accurate knowledge of these two latter fields will give the student an understanding of the nervous system which is to be gained in no other way and which will save him from many mistaken diagnoses. Ignorance of the nervous background of speech constitutes the most serious shortcoming conceivable in the speech expert. Whatever else he may neglect, this thing above all he must not neglect.

STUDY UNDER FOREIGN SPEECH EXPERTS

The second stage in the ideal training of the medical specialist which we have taken as our norm is that of foreign study. Although there are none who have precisely the combination of training and experience which I am now outlining and arguing for, there are some admirably trained men in Europe with whom it would pay any one to spend a year or two. Such study gives the "foreign touch" and brings the student valuable associations. These foreign experts have, moreover, great advantages in the matter of equipment. Before the world war it was easy to find them in Berlin, in Vienna, in Paris. Each was working in a separate field, however, so that it was advisable to pass from one to another. Conditions, of course, are now different.

STUDY UNDER OUR OWN SPECIALISTS

American speech specialists are all narrow in training and in outlook One has devoted himself mostly to laryngology, and another has a purely materialistic point of view. Many have neither medical training nor college education. Most of them do fairly good corrective work, though they fail consistently on the medical side, but their instruction is questionable. Even the medical instructors who have given most attention to the phenomena of speech are, as I have said, too narrow and special in their interests, so that, in order to get a thorough knowledge of speech, one must study under them all. The truth of this assertion can be easily determined by the expedient of writing to each of these men, and asking each one to state the precise nature of his training for the work he is doing.

Nevertheless, no one should neglect this study with the American specialist. He who neglects it cuts himself off from one of the most important broadening influences. One should keep constantly in touch with the work his countrymen are doing, so as to avoid duplicating their researches and so as to play his part in the concerted and consolidated movement which is necessary to the steady advance of the science.

HOME CLINICS, TEACHING, LECTURING, WRITING

After the specialist has passed through the stages of training mentioned above, he may safely consider himself fitted to teach. He should then found a speech clinic, initiate researches, announce courses of lectures, and begin publication. A volume might be written on each of these topics, but I shall have to be content with devoting a paragraph to each.

In the speech clinic is the foundation of all the rest, for without it one cannot conduct research, write, or teach. It should be situated in a large city where ample facilities are afforded for the collection and treatment of charity cases. At this clinic should assemble the assistants, the students, and the patients themselves, of the speech expert.

Obviously, the main purpose of the speech clinic, as of any other, is the conducting of research. The necessity of research in a field so little explored as this of speech need not be shown. One may point out the fact, however, that the spirit of research stimulates and raises the standard of work and treatment besides contributing new methods of procedure, new ways of attacking problems. Research inspires publication. Through it alone may the study of speech be put upon a solid scientific basis.

No professional man, no student who has advanced beyond his fellows in any branch of knowledge by dint of long years of hard work, wishes to keep his knowledge to himself forever. Teaching is a natural corollary to creditable work in any field. The teaching done in and from the speech clinic should be open to medical men and to laymen alike, although the instructor should of course feel free to exclude any persons or classes of persons who, he feels, would be inimical to the best interests of his work.

Publication results naturally and almost necessarily from this teaching and this research. The leader of the clinic should urge and inspire his assistants to publish, for they gain through this a great stimulus which is felt throughout their work. It goes without saying that he should publish himself. No clinic is fulfilling its whole

duty and purpose which is lacking in any one of these activities,—clinical treatment, research, and publication.

MISSIONARY EFFORT

No one would care to have his clinic die with himself. No one wishes to monopolize teaching in his own field. Therefore each specialist should hold it as one of his chief aims to found other clinics in other parts of the country. These clinics, which may perhaps be likened to the missions of the church, should be in all respects as far as possible like the parent clinic. They too should be teaching centers and should carry on treatment, research, and publication.

All the requirements of training and experience which have been outlined above, and all the functions and activities of the clinic which have been described as essential are now to be found in at least one clinic in the United States. The success of the treatment methods taught there is unequalled, especially in the matter of the cure for stammering. This treatment has never "fallen flat" except in the hands of those who did not know how to use it and who have never studied it at its source. The field of speech correction is at present too large for the number of those at work in it. Efficient and well-trained persons who are interested in this line of work are urgently requested to express that interest and to join the movement. They will find nothing but enlargement of outlook, a broader view of speech development, greater efficiency in all their effort, and a pleasant as well as profitable social relationship with other enthusiastic workers.

A CASE OF FOCAL INFECTION OF ACCESSORY SINUS ORIGIN*

By J. G. Parsons, M. D.
SIOUX FALLS, S. D.

Miss W., aged 20, first came under my observation July 20, 1916, complaining of severe earache. There was a foul discharge from the right ear, which, on examination, showed mastoid involvement. An operation was performed at once, and sinus phlebitis was found and drainage was established.

The patient made an uneventful recovery.

On August 7, 1916, the stumps of the tonsils, which had been clipped with a tonsillotome, some years before, were removed by sharp dissection under local anesthesia.

The patient was in apparently good health one month later, with the exception of an amenorrhea, which had persisted for six months. For this she was referred to an internist, who associated the menstrual disturbance and her marked obesity (she weighed 225 pounds) to defective thyroid function, and prescribed thyroid extract.

I next saw her May 15, 1917, when she returned, complaining of her eyes, which had been troubling her for several weeks and had made it necessary to give up her work of teaching. She had had a severe cold one week before, with an excoriating discharge about the nose.

A left keratitis and iritis was found. She had been having dental work done recently, including some crown and bridge work.

Suspecting a possible focal infection of dental origin the teeth were skiagraphed, with negative results.

Failing to get any marked improvement from the usual treatment of atropin, hot applications, and salicylates, the search for focal infection was turned to the sinuses. A diagnosis of left ethmoiditis was made, the infection, as shown by smears, being mainly pneumococcus. Drainage of the ethmoids was followed by rapid improvement. On May 31 the iritis had subsided, and the keratitis improved.

On July 3 the keratitis had completely cleared with the exception of a very faint haze.

On Sept. 14, 1917, she returned with an iritis, and with keratitis in the right eye.

Profiting by previous experience I at once made a careful examination for focal infections, but could discover none, by any of the ordinary methods of investigation.

The condition made slow but gradual progress, and cleared up after a siege of about two months.

On December 22, 1917, the patient returned, complaining of severe pain in the left ear, which was diagnosed as simple catarrhal otitis media.

*Presented before the Sioux Valley Eye and Ear Academy at Sioux City, Iowa, January 21, 1919.

A glycerine-phenol tampon relieved the pain, and the next day the conditions were apparently normal.

On December 25 a long-distance telephone message informed me that she was suffering intensely with pain in the ear and in the back of the head. I learned later that she had had a chill the day before.

On December 26 she was brought to the office, where, under local anesthesia, the bulging drum-head of the left ear was incised. A temperature of 102 degrees, rapid respirations, and a decidedly sick appearance made it imperative to send her to the hospital at once. The discharge from the ear was thin and mucopurulent, and showed nothing but pneumococci in smears.

The temperature shot up to 104.5 degrees the next day, and an internist consultant diagnosed the case as lobar pneumonia, affecting the right lower lobe. There was marked pain and tenderness over the mastoid, in the parietal and occipital, and down the neck in the sternomastoid region. These symptoms made me suspicious of possible mastoid and sinus involvement, especially in view of the fact that she had had this condition on the other side when I first saw her.

The pneumonia cleared up after a crisis on the seventh day, but the pain in the head and neck continued. The ear was irrigated with normal saline, frequently, and the discharge subsided satisfactorily. At no time was there any characteristic swelling of the posterior superior quadrant and adjacent canal wall.

On January 3, 1918, she complained of soreness of the left fore-arm, with some swelling, which was treated by analgesic balm. The temperature fluctuated between normal and 100° after the crisis for several days. The ear was entirely dry and normal in appearance on January 10, 1918. The soreness in the forearm varied from day to day, as did the tenderness in the neck and occiput.

On January 15, 1918, the temperature shot up to 103.4°, with pulse 84 and respirations 24. The pain in the neck, parietal and occipital became so severe that morphine was required. There were daily fluctuations of temperature from about 99.5° to 103° or 104°, and, while the respirations, at times, were rapid, running up above 40, the pulse-rate varied from 80 to 100. By this time I was able to rule out the suspicion of any intracranial lesion, which seemed possible at first.

Repeated examinations of the nose and throat were made, but no evidence of focal infection was visible.

Consultation with several of my colleagues offered no clue to the solution of the problem, further than that there must be some focal infection present. A blood-count showed a moderate leucocytosis. Finally, on January 24, I made a general exploratory opening of all the sinuses under general anesthesia. Pus was found in the left antrum and in the right ethmoid. The temperature promptly dropped from 104° to normal, and with the exception of one rise to 102° two days later it remained about normal.

On February 3 the forearm showed a decided swelling, and, while not certain of fluctuation, an incision was made, evacuating a few drops of pus.

On February 5, the patient was discharged, feeling quite well. However, on February 11 she returned, badly frightened by another rise of temperature, and complaining again of the forearm. There was very little swelling, but distinct fluctuation. A free incision was made, disclosing an interosseous abscess from which four ounces of pus were evacuated. Smears of this pus showed pneumococci and streptococci.

The patient has remained well since her discharge from the hospital on February 20.

I have reported this case for the purpose of emphasizing three points of importance:

First, the possibility of encountering a chain of symptoms which may develop in the course of a middle-ear infection which might lead us to make an unwarranted diagnosis of mastoiditis and sinus thrombosis. In this case it is evident that the middle-ear condition was relatively trifling, and that the pain and tenderness back of the ear, down the sterno-mastoid, and in the occiput were probably due to myositis.

Second, the importance of the accessory sinuses as focal points of infection is much greater than what has been usually admitted.

Third, the exploratory opening of sinuses in the search for infection, when other methods of investigation have proven of no avail, is justifiable, and should always be borne in mind in any obscure case where the symptoms point to focal infection. Ordinary methods of rhinoscopy may not be able to discover a deep-seated sinus infection where it does not produce pus in quantities sufficient to be visible within the nasal cavity. When we bear in mind the serious results which may follow a small abscess at the apex of a tooth, we should not forget that foci of even greater size may be present in the sinuses, and may escape our notice.

THE
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MINNEAPOLIS CLINIC WEEK

At a meeting held on February 21, of the Executive Committee of the Surgical Section of the Hennepin County Medical Society, it was decided to offer again to the medical men of the Northwest, or from any state from which they may choose to come, the opportunity to see the clinical material of Minneapolis under its clinical men. This preliminary announcement is made in order that our readers may avail themselves of an opportunity later to participate in the clinics. The date set for the coming clinics is from May 5 to May 9, inclusive. This is a month later than they were held last year.

The men who had the clinic in charge last year have learned from experience that a change in program is desirable, and the committee expects to offer something more attractive, which will occupy the visitors the entire forenoon and a part of the afternoon. The clinics will be so diversified that almost anything that the visitor chooses to investigate will be prepared for him.

The attendance last year, in spite of the fact that the medical men were preparing for service in the cantonments and overseas, far exceeded expectations; and this year we hope that, in spite of the fact that a number of men are absent on army duty, the remaining men will be glad to avail themselves of this clinical opportunity.

From time to time the progress of the plans of Clinic Week will be made known to the readers of THE JOURNAL-LANCET; and it is expected that the program will be prepared sufficiently far in advance to give every man an opportunity to decide upon which days he would like to attend the clinics. We, therefore, ask the support of all men interested, both at home and at a distance, with a promise that the clinics will be up to their expectations from every point of view.

CHIROPRACTIC IN MINNESOTA

It seems to be pretty generally known throughout Minnesota that the legislature is in session, and, as usual, a number of bills referring to medical men, pharmacists, and the various irregular practitioners, are brought to the attention of the legislators. For some reason or other there seems to be general apathy on the part of medical men toward bills before the legislature. The one bill which has been fought for some years, the bill of the chiropractors, is up again and has passed the House by a unanimous vote, 92 to 0. No opposition by a single member of the legislature has been made to the recognition of this cult, and, unless something is done, this bill will pass the Senate.

The Committee on Medical Legislation of the State Medical Association has been considering the matter, and will doubtless put in its protest; but action of the committee will be of no avail unless the medical profession stands behind them. It is a comparatively easy matter for the men on the outside to let the men on the inside do all the work; but, if this bill is to be defeated, it must be done by correspondence with senators and representatives, with some explanation as to the inadvisability of creating a new board of examiners for the chiropractors.

In spite of the fact that for the last six years this bill has bobbed up and has been defeated, there is evidently strong pressure being brought to bear that will now carry it through unless the medical profession is aroused to the proper pitch.

It is well known the chiropractors have been practicing their so-called art without restriction, and schools for chiropractors have sprung up in various parts of the country, notably in the Twin Cities, and they have gone on teaching their indifferent measures to the too willing student. It is also known that men who are wholly unfitted for this kind of work are taking it up as a means of livelihood, and when they once get into the saddle they practice on anything and everything that comes into their net. All of our readers know, too, that a course in chiropractic is a very short one, the teaching is wholly didactic except where the demonstrator uses a lay figure, or a

human body, for his demonstrations. The result is that uncultured, uneducated, and ignorant men take up this work when they would be doing a greater service to their country if they stuck to their various occupations; but the course is so easy and so short, comprising a few weeks, that the temptation is too strong for the laboring man to seek an easy road to fame and compensation.

This work is taught without the use of dissecting material,—that is, the chiropractor is not permitted by the various states in which the operator studies, to dissect the human body, and to learn the ground-work of bones, muscles, and nerves. The result, sometimes, is very amusing, as well as very disconcerting. They claim that they have read books on anatomy and are thoroughly informed as to the anatomical units; but, as a matter of fact, their knowledge of anatomy is nil. They know nothing of the attachment of the muscles to bones; they know nothing of the action of muscles; and they know absolutely nothing of the nervous mechanism which controls the muscles. Consequently, they are in a position, in their point of view, to treat anything that they can lay their hands on.

An unfortunate result of this development is that they treat acute exudative and inflammatory conditions. They also treat diseases of an infectious origin, that are not supposed to be dealt with by manual mechanical movements. Then, too, there is always a possibility of their attempting to treat communicable diseases, promising and shouting about their wonderful methods of cure. Every physician who has studied anatomy, physiology, chemistry, and allied subjects, knows that most of these disorders should be treated by rest rather than by exercise, and certainly a number of them should not be treated by manipulation of joints that are supposed to be luxated.

The legislature, unfortunately, does not take into consideration, in the discussion on this bill, the fact that schools of medicine are established in various parts of the country for the instruction in fundamentals in medicine, and that every medical student in a recognized medical school must have at least two years in the academic department of a university. This is followed by three or four years in medicine and one year as an interne in a high-grade hospital. Under such educational methods it is very unfair that these untrained and unprepared men should treat diseases of which they have no knowledge, and for the treatment of which they are wholly unprepared. It is debasing to permit a cult of this order to secure their training in a few weeks, men who have no opportunity to study and in many instances are incapable of learning to treat diseases, while the medical man prepares himself for such work by six or seven years of training under the most favorable conditions, and with all the opportunities possible to know the human frame. Conceding that this is true, the average legislator does not appreciate that doctors of medicine adopt this science in order to give the best of care and attention to the sick individual; and they are apt to ignore this fact because they do not give it sufficient study.

It seems reasonable to assert that every one who is engaged in the healing art, of whatever kind, should be prepared in the fundamentals, and should be put on the same footing as the medical man,—that is, he should be required to have a knowledge of the principal branches in medical science before he resorts to any kind of treatment.

Unless something is done at once, or unless the governor sees fit to veto the chiropractic bill, there will probably be a board of examiners, men who give this special method of treatment. This bill, of course, or one similar to it, has been put forward in many states, and, yet, but few states have given the chiropractor recognition. Minnesota has always stood for the highest things in medicine, and has been the banner state in its medical laws; but, if the legislature grants the chiropractors' demands, Minnesota will have fallen from its pedestal.

The bill, introduced in South Dakota and considered recently by the legislature, was lost when it came up for final passing; and let us hope that the same thing will occur to the bill in the state of Minnesota.

The time is ripe to get very active in our opposition to this bill, unless we have come to the conclusion that it is unwise to make any opposition. Of course, medical men get tired of these things,—this constant fighting and dickering in their efforts to prevent the irregular practitioner from gaining recognition; at the same time we ought to consider the men who have spent years and money in preparation, and we ought to consider still further the people who are more or less indifferent to whatever method they use. We are partly responsible for this state of affairs in not developing, or advertising, if we may so term it, the treatment by massage carried out by men and women who are trained in the fundamentals and who have had years of experience, before they begin their operations.

If every physician and surgeon will write to

his senator, it may be possible yet to defeat the passage of the bill; but, if we are going to maintain our spirit of indifference toward it, we may expect that the bill will pass, and perhaps be signed by the governor, simply because of our indifference. Of course, the main argument brought up in all these measures, and particularly this one, is the feeling among the public and in the legislature that doctors are jealous of these new departures. Nothing of this kind is true, and it is in no spirit of jealousy that this criticism is offered, or that an effort is to be made to defeat the bill of the chiropractor.

CHIROPRACTIC IN NORTH DAKOTA

[*This statement of the situation in North Dakota came to us in the form of a communication and we asked permission to use it in the form of an editorial. It has our unqualified endorsement.* THE EDITOR.]

A bill, officially known as House Bill No. 176, to license chiropractors, has been passed by the lower house of the North Dakota Legislature, and, we are informed, will probably be passed by the Senate.

The essential part of this bill appears in the first three sections, which read as follows:

SECTION 1. All duly licensed chiropractors, practicing in the State of North Dakota, shall observe and be subject to all state and municipal regulations relating to the control of contagious and infectious diseases, sign death and birth certificates, and sign certificates pertaining to public health and shall report to the proper health officers the same as other licensed practitioners, and that any such certificates signed by a doctor or chiropractic, duly licensed as such under the laws of this State, shall be of the same force and effect as though signed by any other licensed practitioner. All state, county and municipal officers of this State shall recognize all licensed chiropractors.

SEC. 2. Licensed chiropractors shall have the same right to practice in public and private hospitals and other institutions in this State, the same as regularly licensed physicians.

SEC. 3. Chiropractors, when licensed, shall have all the rights and privileges granted to medical doctors and osteopaths, with the exception that chiropractors shall practice their own method of healing.

The last section (No. 9) of the bill makes the act an *emergency* one, thus putting it into *immediate* effect.

The first noticeable feature of this bill is the illiterate language used in every section of it except one. The excepted section is composed of less than two lines, and its actual meaning is obtained only by inference.

The next noticeable feature of the bill is that it makes a chiropractor who receives a certificate from a "State Board of Chiropractic Examiners" a diagnostician capable of determining whether a person has any of the diseases now reportable, or hereafter made reportable, in that state. Inasmuch as the bill confines, at least apparently, the chiropractor to the practice of chiropractic (last line of Section 3), it would be interesting to know how a chiropractor is to diagnose diphtheria or syphilis by chiropractic methods.

If every member of the North Dakota Legislature (House and Senate) would truthfully answer a specific question that this bill puts before him, the bill would be *unanimously* defeated. This is the question, "If your daughter were engaged to a man suspected of having syphilis, would you accept the certificate of a chiropractor as evidence that her fiancé was not so afflicted, and consent to her marriage to him?" Let us put the question in a less objectionable form: "If your neighbor's children had severe colds and sore throats in the time of an epidemic of diphtheria, would you permit your children to play with them if the latter had a certificate from a licensed chiropractor that they did not have diphtheria?" "Smallpox," "scarlet fever," or the name of any other contagious disease, with its common symptoms, may be substituted for "diphtheria" in our last question.

Is it conceivable that there is one member of either house of the North Dakota Legislature who would answer *yes* to either of the above questions? It is not conceivable to us that any person, not a fanatic, would so answer; and yet a negative answer cannot be reconciled with a vote for this bill.

Such a bill, if passed, will be fraught with more evil than any purely economic bill that this body may pass, although such evil may not manifest itself for years to come.

The medical profession of North Dakota, notwithstanding the high character of almost every member of it, seems to have no influence whatever with the members of the present legislative body of the state. Facts, arguments, common everyday experience—all are ignored; and a small group of men, most of whom have little general education and no scientific training worth mentioning, are to be clothed by this bill with a power whose everyday exercise may cause the deaths of innumerable people, young and old.

Can any man fathom the reasoning that permits mature men to vote for such a bill? We presume there is not the faintest suspicion that enough votes could be purchased by a small group of chiropractors to pass this bill. Some

other motive or power must be found for such incredible action. We confess our utter inability to find a cause for such action that appeals to our intelligence as a reason why a single vote should be cast by a disinterested (shall we say *financially* disinterested?) man. Neither reason nor common sense solves the problem. We must confess, however, that we have some suspicions as to some explanations of this phenomenon, which manifests itself in other states than North Dakota.

ARE PHYSICIANS SLACKERS? "ANSWER THAT QUESTION YES OR NO, WILL YOU?"

Is any implication implied in the above question obnoxious to any of our sensitive readers? If so, we invite such reader, or readers, to defend the profession against such possible charge. Indisputable facts will themselves soon answer the question along the line of action which has suggested the query.

Surgeon General Blue has recently called attention to a condition which now confronts the medical profession in view of the fact that the spread of venereal diseases will accompany the demobilization of the army, especially as army discipline will no longer be a restraint; and he asks the co-operation of the profession on behalf of the Bureau of the Public Health Service in *four* specific ways named on a postal card to be returned (franked) to him. The percentage of returned postal cards, properly interpreted, will answer the query in the caption of this editorial.

Again: the Medical Section of the Council of National Defense has recently sent to every physician in the Central States, except those in the Medical Corps and the Volunteer Medical Service Corps, a questionnaire for the purpose of obtaining "complete individual information covering the members of the profession."

Will this important survey be made fairly complete, or be so incomplete as to be almost worthless because of failure on the part of many physicians to furnish the information? "Will you answer that question, or will you not?"

And again: Who is responsible for holding some of our sister states out of the registration area of the country? That is, who is responsible for withholding from the public the *vital* information contained in birth and death certificates, which are well-nigh indispensable in the health work of a civilized state?

And still again: Who is responsible, in whole or in part, that the local and, possibly, the state medical societies, in nearly all parts of the country, are practically moribund?

We are not "looking for" slackers, nor are we putting on pessimistic glasses: we are simply recording what seems to us unpleasant facts indicating conditions that should be removed. Our "pro bono publico" and other optimistic readers are invited to express in our columns their views on the conditions specifically named as suggested in this —"screed."

THE MINNEAPOLIS PUBLIC HEALTH BILL

Minneapolis is endeavoring to change its public health laws in order to simplify and to correlate the various health interests, as prepared in the bill, which is to be introduced in the Minnesota legislature this year.

The bill contemplates, first, a new health board, which will replace other boards now in existence. The bill has been very carefully studied from every possible angle, and has been gone over in committee meetings innumerable times; and it has received the endorsement of the Hennepin County Medical Society. There may be some opposition to this bill, but, when one has considered it from its various points of view, the opposition will probably not be serious.

The proposed new board will replace the Board of Corrections and Charity, which now has full charge of the Minneapolis city hospitals. It also provides for the work of the Minneapolis Health Commission and for its workers. It further provides for the inspection of children of the public schools, thus taking away from the Board of Education their pet measure, under which the work has fallen into a deplorable condition. It is expected that this feature of the bill will be strenuously opposed, but the general opinion is that a board of health, such as is proposed by the new bill, will do better and more systematic school-inspection work than has ever been done before in the city of Minneapolis.

We earnestly suggest to Minneapolis medical men that they look into this matter and the points of the bill very carefully, in order that they may familiarize themselves with its possibilities, and may help in its passage by the legislature.

The bill will be given in our next issue.

BOOK NOTICES

A Manual of Gynecology. By John Cooke Hirst, M. D., Associate in Gynecology, University of Pennsylvania; Obstetrician and Gynecologist to the Philadelphia General Hospital. 12mo of 466 pages with 175 illustrations; Philadelphia and London: W. B. Saunders Company, 1918. Cloth, $2.50 net.

In this volume the author has presented the subject of gynecology in a simple, abbreviated, concise manner, which makes it a very valuable student book. Every line is to the point and of extreme value. The illustrations are practically all diagrammatical, but very clear and accurate. The surgical part is of exceptional value to the student and young practitioner because of the accurate and simple manner in which the major surgery is treated and the importance given to the careful technic which should be exercised in minor surgery.

The publication is largely recommended as a student manual. —Condit.

The Orthopedic Treatment of Gunshot Injuries. By Leo Mayer, M. D., Instructor in Orthopedic Surgery, New York Postgraduate Medical School and Hospital, with an introduction by Col. E. G. Brackett, M. C. N. A., Director of Military Orthopedic Surgery. 12mo of 250 pages, with 184 illustrations. Philadelphia and London: W. B. Saunders Company, 1918. Cloth, $2.50 net.

This volume is not intended to be a text on orthopedic surgery. Many of the common injuries and deformities occurring in civil life have not been discussed. It deals especially with the orthopedic treatment of war injuries, and is especially interesting in its first part (Chapters I to IV) in showing how carefully the author has applied orthopedic treatment in the form of casts and braces at the front.

It is not padded with non-essentials, but full of practical experience and many valuable points not commonly found in the average text-book.

The chapters on nerves and tendons deal with these subjects in detail, and contain basic principles which are valuable to the general medical man, as well as to the specialist.

The book gives a thorough discussion of artificial limbs,—a thing which is neglected in most text-books.

Its last chapter is devoted to the aims and organization of the orthopedic reconstruction hospital, which gives an "insight" into the comprehensive plan for rehabilitation of the crippled soldier so that he may become self-supporting. —Johnson (J. A.).

The Surgical Clinics of Chicago. Volume II, No. 6, December, 1918. (Index Number). Octavo of 182 pages, 63 illustrations. Philadelphia and London: W. B. Saunders Company, 1918. Published bimonthly. Price per year, paper, $10.00; cloth, $14.00

Dr. Arthur Dean Bevan discusses a rare case, "Acute Necrosis of the Thyroid Gland," and also gives the technic of operation for this condition. He reports a case of "Senile Gangrene" treated by the "Stephen Smith Amputation at the Knee," the original bilateral skin-flap operation. The next article gives the Bevan operation for "Undescended Testes" developed from reconstruction for the draft. A case of "Chronic Vicious Circle," the bugbear of gastro-enterostomy, is described, together with the operation for "Correction of the Angulation." The clinic closes with a case of "Ruptured Urethra," impressing early proper treatment to obviate the results of infection.

A new operation for perineal laceration with rectocele, which emphasizes the approximating of fascial surfaces, the use of purse-strings and buried sutures, is given by Dr. Thomas Watkins.

Dr. G. E. Shambaugh discusses "The Clinical Problems Relating to the Faucial Tonsil," especially those of focal infection and operative technic.

Dr. A. J. Ochsner gives the technic of fixation of a "Compound Comminuted Fracture of Both Bones of the Leg," with chromic catgut; also a plastic operation on the face.

Dr. Herman Kretschemer reports a case of "Hematuria and Purpura," and discusses the literature of this condition, the general features of the disease, differential diagnosis, etiology, and pathological anatomy.

The "Reconstruction of Ears and Nose" of congenital deformity is described by Dr. Emil Beck.

Dr. Lewis McArthur presents a case of "Fibromyoma of the Stomach Simulating Ulcer."

Three genito-urinary cases, ureteral calculus, varicocele, and bladder-stone, are demonstrated by Dr. C. M. McKenna.

"The Treatment of Early and Late Infections of the Hand and Fingers, with Special Reference to Tendon Transplantations" is given by Dr. Maurice Bernstein.

The book contains an excellent index.

—Simons.

MISCELLANY

THE CANCER DECALOGUE

We publish by request the Massachusetts Medical Society cancer decalogue, following the Bostonese capitalization, which does not materially detract from the excellent ten-point statement of known facts, dubbed "decalogue."

1. The Classical Signs of Cancer are the signs of its incurable stages. Do not wait for the classical signs.

2. Early Cancer Causes No Pain. Its symptoms are not distinctive, but should arouse suspicion. Confirm or overthrow this suspicion immediately by a thorough examination and, if necessary, by operation. The advice, "Do not trouble that lump unless it troubles you," has cost countless lives.

3. There is No Sharp Line Between the Benign and the Malignant. Many benign new growths become malignant and should therefore be removed without delay. All specimens should be examined microscopically to confirm the clinical diagnosis.

4. Precancerous Stage. Chronic irritation is a source of cancer. The site and the cause of any chronic irritation should be removed. All erosions, ulcerations, and indurations of a chronic character should be excised. They are likely to become cancer.

5. Early Cancer is usually curable by radical opera-

tion. The early operation is the effective one. Do not perform less radical operations on favorable cases than you do on unfavorable ones. The chances for a permanent cure are proportionate to the extent of the first operation. Make wide dissections, incision into cancer tissue in the wound defeats the object of the operation and leads to certain local recurrence.

6. Late Cancer is incurable though not always unrelievable. Radium, *x*-ray, ligation, cautery or palliative operations may change distress to comfort and may even prolong life.

7. Cancer of the Breast. All chronic lumps in the breast should be removed without delay. Benign tumors can be removed without mutilation. Examine all specimens microscopically. An immediate microscopical examination is desirable since, if positive, it permits a radical operation at the same sitting. A radical operation performed ten days after an exploration is nearly always unsuccessful in curing Cancer of the Breast.

8. Cancer of the Uterus. Any irregular flowing demands thorough investigation. Offensive or even very slight serous flows are especially suspicious. Curette and examine microscopically. Amputate all eroded surfaces which do not yield promptly to treatment. Do not wait for a positive diagnosis.

9. Cancer of the Digestive System is difficult of early diagnosis and therefore unfavorable in prognosis. All persistent and recurring indigestions (more especially if attended by change of color and loss of weight), and any bleeding or offensive discharges demand prompt and thorough investigation.

10. Cancer of the Skin. Any wart, moles or birthmarks which enlarge, change color, or become irritated should be removed promptly. They are likely to become cancer. Do not wait for a positive diagnosis.

PULMONARY CONDITIONS SIMULATING TUBERCULOSIS

Dr. J. H. Elliott, of Toronto, in his experience as visiting physician to a number of military hospitals, was called upon continually to make diagnoses upon large numbers of men with diseases of the chest. He found very many soldiers who had been returned from overseas because of the diagnosis, "tuberculosis suspect," whom he found to be really suffering from non-tuberculous pulmonary disease. There is no doubt, he thinks, that 60 to 80 per cent of the cases returned to Canada from overseas as tuberculosis suspect must be classified as not suffering from tuberculosis. He classifies and gives differential diagnostic points on a number of conditions that may stimulate the symptoms and signs of pulmonary tuberculosis. These conditions fall under the following heads: intranasal complications, dental complications, diseases of the bronchial tree, pulmonary diseases, pulmonary abscess, diseases of the pleura, empyema, gunshot wounds of the chest, other pulmonary conditions, conditions secondary to heart and circulation, Graves' disease, and gas poisoning. He also has a few words to say about the malingerer.—*American Review of Tuberculosis.*

FOR BETTER RURAL HEALTH

Much remains to be done in rural districts, according to the annual report of the Secretary of Agriculture, to control such pests as mosquitoes and the hookworm, to eliminate the sources of typhoid fever, and, even more, to give the country districts the advantage of modern hospitals, nursing, and specialized medical practice.

Noting that many agencies, some of them private enterprises with large funds, are working for improvement, the report says that the Department of Agriculture, through its home demonstration service, is giving valuable aid, and the public health service is increasingly extending its functions.

To what extent the further projection of effort is a matter for State or local action remains to be determined, says the Secretary, but it seems clear that there should be no cessation of activities until there has been completed in every rural community of the Union an effective sanitary service and, through the provision of adequate machinery, steps taken to control and eliminate the sources of disease and to provide the necessary modern medical and dental facilities, easily accessible to the mass of the people.

NEWS ITEMS

MINNEAPOLIS CLINIC WEEK—MAY 5-9

The great success of the first Minneapolis Clinic Week, held in 1918, showed Minneapolis medical men that the Week was worthy to be made a permanent annual event; but the disorganized condition of all things medical this year made it seem wise to many not to observe the Week this spring. Upon further consideration the committee decided that there are so many new things to present that the Week can be made, with certain changes, even more profitable than it was last year; and it was decided to hold the clinic on May 5 to 9, inclusive.

Dr. P. A. Boyum has moved from Keene, N. D., to Harvey, N. D.

Dr. G. W. Humphrey was elected mayor of Moorhead last week.

Dr. W. H. Moore has moved from Harvey, N. D., to Huron, S. D.

Dr. T. P. Martin, of Mayville, N. D., has returned from war service.

Dr. O. E. Distad has moved from Williston, N. D., to Beresford, S. D.

Dr. J. G. Arneberg, of Grand Forks, N. D., is at home from war service.

Dr. Robert T. Dott has moved from Salem, S. D., to Sioux Falls, S. D.

Dr. Theodor Bratrud, of Warren, is spending the winter at San Diego, Calif.

Dr. G. E. Mordoff, of Hettinger, N. D., is doing postgraduate work in Chicago.

The Virginia detention hospital is practically completed, and has cost about $30,000.

Dr. D. F. Moynihan, of Sauk Centre, is home from France, and has resumed practice.

A twenty-room addition will soon be added to St. Vincent's Hospital building at Crookston.

Dr. J. R. Nannestad, of Albert Lea, has returned from war service and resumed practice.

Dr. H. L. Sergeant, who practiced at Hawley before he entered the service, has located at Dalton.

Dr. W. F. Plassmann has resumed practice at Golden Valley, N. D., after an extended absence in the East.

Captain Angus Morison, of Minneapolis, has returned from France, and is now located at Fort Snelling.

Dr. C. C. Burlinghame, formerly of Fergus Falls, has been decorated in France for distinguished service.

Dr. P. E. Stangl was appointed city physician of St. Cloud last month upon the resignation of Dr. J. H. Beaty.

The Red Cross Chapter of Nicollet County is formulating a plan to erect a Memorial Hospital at a cost of $50,000.

Dr. Harry B. Zimmerman, the first St. Paul physician to enlist for service in France, has reached this country.

The North Dakota State Medical Association will hold its annual meeting this year at Grand Forks on June 18 and 19.

Dr. I. J. Markel has resigned from the staff of the Homestake Hospital, of Lead, S. D., and has moved to Elkhart, Ind.

Dr. Henry L. Bawden, who recently moved from Iowa to Ismay, Mont., died at Ismay on January 22, at the age of 73.

The Sisters of the Presentation have purchased the Custer County Hospital at Miles City, Mont. The price paid was $25,000.

Dr. D. W. Craig, of Sioux Falls, S. D., has been commissioned Captain in the Medical Section of the Officers Reserve Corps.

Dr. W. G. Smith, of Hettinger, who retired from practice several years ago, has returned to that place and resumed practice.

Dr. Henry B. Weinburgh, of Waterville, received the French Croix de Guerre for bravery in caring for the wounded under fire.

The Douglas County Medical Society (Superior, Wis.) has petitioned the City of Superior to erect a new detention hospital building.

Dr. Willis E. White, of Mayville, N. D., died the last of January at the age of 49. Dr. White had practiced in North Dakota since 1901.

Dr. N. J. Shields has moved from Wapheton, N. D., to San Luis Obispo, Calif., and is associated with Dr. W. H. Jones of that place.

Dr. Arthur I. Haskell, a recent graduate of the Medical School of the University of Minnesota has been awarded the British Military Cross.

Dr. H. J. Rowe, of Casselton, N. D., is cleaning up the volunteer work at Warwick, N. D., where he was called on account of the influenza.

The Board of Health of Grand Forks, N. D., will establish a children's dispensary, under the charge of Dr. H. O'Keefe, the city health officer.

Dr. Asa W. Daniels, a pioneer physician of Minnesota, who practiced over fifty years at St. Peter, celebrated his 90th birthday last month at his home in California.

The School of Nurses of the Medical School of the University of Minnesota graduated six nurses last month, and gave sixteen certificates of public health nursing.

Dr. L. F. Fisher, of Dickinson, N. D., has formed a partnership with Dr. F. H. Gambell, of Thief River Falls. Dr. Gambell expects to retire from practice soon.

Dr. H. J. Hanson, of Hutchinson, has moved to New London, and become associated with Dr. Oppegaard, of that place, under the firm name of Drs. Oppegaard & Hanson.

The Visiting Nurses of Minneapolis now number eighteen. This year they will make visits to homes whose inmates cannot pay for a regular nurse. For such service they will charge 75 cents a visit.

Dr. E. W. Webber, of Chisholm, has been appointed chief physician of the Duluth, Mesaba and Northern Railway, and will move to Proctor, where he will have charge of the new railroad hospital at that point.

St. John's Hospital of Red Wing treated over one thousand patients last year who were residents of over a dozen states. The new $50,000 addition to the hospital building will soon be ready for occupancy.

Dr. W. H. Porter, of Calvin, N. D., is the only physician in the North Dakota legislature this year. He is in the Senate, and will be the only medical man to fight the chiropractic bill on the floor of either house.

At Washington's birthday service held in the great Auditorium of St. Paul in the evening of February 22, the boxes on one side were occupied by convalescent soldiers, and the boxes on the other side by Red Cross nurses.

Dr. F. R. Smyth, of Bismarck, N. D., will have general supervision of the campaign outlined by the Government against venereal diseases in that state. Dr. Smyth has been an indefatigable worker in all public health work in that state.

The Attorney General of Minnesota has just given an opinion which bars osteopaths from treating venereal diseases, which they have been treating with drugs (mercury). The law limits them in their practice to drugless methods.

Dr. Paul H. Rowe, son of Dr. J. H. Rowe, of Casselton, N. D., has returned from France, where he was a cardiovascular specialist in the aviation service. Dr. Rowe spent a couple of years as assistant of Dr. Sippy, of Chicago.

Miss Frances Palmer, a Red Cross nurse of St. Paul, has been specially cited by General Pershing for conspicuous service at Chateau Thierry and St. Mihiel. Miss Palmer is now in Coblenz, Germany, with the American forces.

The Minnesota State Board of Visitors was so impressed with their visits to the State's penal and charitable institutions that they recommended, in their recent report, that certificates of physical and mental fitness for marriage be required.

The State Board of Health of South Dakota is seeking to have laws passed to enable the Board to abolish typhoid fever from that state. The Board seeks freedom of action and abundance of funds to deal with any epidemic that may break out in the state.

If the House Bill No. 176, to license chiropractors, passes the North Dakota senate a chiropractor in that state may become superintendent of the State Hospital for Insane, of the State Tuberculosis Sanitarium, or of Public Health. He could also write death certificates.

The "Automotive" Exhibition, held in Minneapolis last week, was attended by more physicians from the Northwest than ever gathered here at one time before. They came, mostly perhaps, for a rest and to buy higher-grade machines than they have been running,—Packards, Pierce Arrows, Wintons, etc.

A newspaper dispatch from Aberdeen, S. D., says that Dr. R. L. Murdy, of that city, will head a movement to form a "Modern Clinic Hospital." Whether reliable or not, the news item points to the fact that a group of men forming a clinic to co-operate in diagnosis and treatment will be more common in the future than in the past.

The new staff of St. Mary's Hospital at Duluth will adopt a constitution and by-laws that will conform with the suggestions of the American College of Surgeons for conducting hospitals. A committee recently appointed by the staff to outline the work consists of Drs. E. L. Tuohy, A. J. Braden, C. W. Taylor, T. L. Chapman, and E. Z. Shapiro, all of Duluth.

The Upper Mississippi Valley Medical Society held its annual meeting at Brainerd last month, and elected officers as follows: President, Dr. A. W. Ide, Brainerd; vice-president, Dr. A. V. Fankboner, Motley; secretary-treasurer, Dr. J. A. Evert, Brainerd; censor, Dr. J. A. Thabes, Brainerd; delegates, Dr. Paul Kenyon, Wadena, and Dr. L. M. Roberts, Little Falls. The next meeting will be held May 20 at Pine River.

Dr. Egerton Crispin, Lieutenant-Commander of the Medical Corps of the Navy, recently renewed acquaintances in Rochester while on his way to his home in Los Angeles, Calif., from overseas. Dr. Crispin, who was associated with the Mayo Clinic from 1913 to 1916, was stationed in Edinburgh in charge of the Medical Division of the Naval Hospital at the Grand Fleet base. He was a guest of one of the Captains of the English Navy, and saw the surrender of the German fleet on the twenty-first of November. In December he went to France, returning to this country on the "President Grant," the latter part of January.

PHYSICIANS LICENSED AT THE JANUARY (1919) EXAMINATION TO PRACTICE IN MINNESOTA

BY EXAMINATION

Bentley, Norman P.....Syracuse U., 1909
Bjorgo, Carl W.....Rush, 1918
Hanson, Harlow J.....U. of Illinois, 1919
King, William R.....Harvard, 1917
Waldie, George McL.....Tufts, 1911

BY RECIPROCITY

Dummer, William M.....Northwestern, 1918
Hook, John S.....Western Penn. U., 1904
Lemon, Willis S.....Toronto, 1905

LOCATION WANTED

By an experienced medical man capable of doing röntgenographic and laboratory work. Address 210, care of this office.

OFFICE POSITION WANTED

A competent girl who lives at home desires a position in a physician's or dentist's office in Minneapolis. Best of references given. Address 161, care of this office.

POSITION AS LABORATORY TECHNICIAN WANTED

By a young woman who has the bacholor's degree in chemistry and biology. For further information or interview, address 211, care of this office.

LOCATION WANTED

A physician of extended experience desires a good location in a city or a country town in Minnesota. A graduate of a high-grade Eastern medical school. Address 215, care of this office.

PHYSICIAN WANTED

A physician is wanted in a town of 450, situated in a rich wheat country on the Red River. Nearest physicians 17 miles east and 17 miles west and 22 miles south. Address 206, care of this office.

POSITION AS LOCUM TENENS OR ASSISTANT WANTED

By an experienced physician (aged 39) who has recently returned from a postgraduate course in England. Has had special training in obstetrics and anesthetics. Address 214, care of this office.

WANTED—ASSISTANTSHIP OR PARTNERSHIP

A partnership with an obstetrician, a general practitioner in Minneapolis, by a physician of ten years' experience in obstetrics and general practice. Might buy a location if price right with introduction. References furnished. Address 207, care of this office.

AN ASSISTANT IN INTERNAL MEDICINE WANTED

At once, a graduate in medicine with laboratory training, preferably one who aims to become an internist. Will pay increasing straight salary. Write for interview. Address 208, care of this office.

FINE OPENING FOR A YOUNG SURGEON

Would like to take up with a good young surgeon a proposition whereby he can establish himself in a city of 5,000 in northern Minnesota and have good hospital facilities. Cash receipts have been from $500 to $1,200 per month. Address 205, care of this office.

OFFICE SPACE WANTED IN MINNEAPOLIS

A physician desires to sublease office, and share reception room with doctor or dentist in a down-town office building. Address 216, care of this office.

POSITION AS ASSISTANT WANTED

A recent graduate who plans to do missionary medical work in China, wants a position for a year or more that will give him the largest experience in that time. Is 27; has the B. A. degree from the University of Minnesota, and the M. D. degree from Columbia; has had one year's interneship in a rotary service (largely surgical) in the Brooklyn (N. Y.) Hospital. Institutional work preferred. Can begin work early in April. Address 212, care of this office.

PHYSICIAN WANTED

Wanted, a physician from an A + school, one that can do some surgery, to locate in an A1 town in North Dakota. One who has been in the Government service preferred, but want to hear from all. One physician in the town; also a small hospital, and nurse in attendance. Have a very large territory to cover. Address 213, care of this office.

LARGE SURGICAL PRACTICE FOR SALE

In a North Dakota city of 15,000 population to a surgeon of Scandinavian descent. The cash receipts have been from $1,000 to $3,000 a month. With my practice go the complete first-class furniture and office outfit for one waiting-room, two office-rooms, and one dressing-room, including typewriter, full set of instruments for all kinds of operations, medical apparatus, and library (20 sections), etc., insured for $2,000, but worth much more. Will turn the whole business over for $3,000 cash. For full information address 209, care of this office.

NEW ORLEANS POLYCLINIC

The Graduate School of Medicine of the Tulane University of Louisiana, thirty-second annual session, opened Sept. 23, 1918, and closes June 7, 1919. Physicians will find the Polyclinic an excellent means for posting themselves upon modern progress in all branches of medicine and surgery, including laboratory and cadaveric work. Special attention given to military matters. For further information address Charles Chassaignac, M. D., Dean, postoffice drawer 770, New Orleans. Tulane also offers highest class education leading to degrees in medicine, pharmacy, dentistry, hygiene and tropical medicine.

THE YOUTH'S COMPANION

Is worth more to family life today than ever before. Today, those who are responsible for the welfare of the family realize the imperative need of worthwhile reading and what it means to individual character, the home life and the state. Everywhere the waste and chaff, the worthless and inferior, are going to the discard.

The Youth's Companion stands first, last and continually for the best there is for all ages. It has character and creates like character. That is why, in these sifting times, the family turns to its 52 issues a year full of entertainment and suggestion and information, and is never disappointed.

It costs only $2.00 a year to provide your family with the very best reading matter published. In both quantity and quality as well as in variety The Youth's Companion excels.

Subscribe at once and you will get the opening chapters of Arthur Pier's great serial, The Hilltop Troop.

The following special offer is made to *new* subscribers:

1. The Youth's Companion—52 issues from the time of subscription.
2. The Companion Home Calendar for 1919.

All the above for only $2.00, or you may include

3. McCall's Magazine—12 fashion numbers. All for only $2.50. The two magazines may be sent to separate addresses if desired.—The Youth's Companion, Commonwealth Avenue and St. Paul Street, Boston, Mass.

PUBLISHER'S DEPARTMENT

THE HARRISON ACT

As amended by the new War Revenue Act will be mailed, postpaid, to any druggist, physician, dentist, or veterinarian who will send a postal request therefor to "Mailing Department, Parke, Davis & Co., Detroit, Mich." Please observe directions strictly.

SAL HEPATICA

Sal Hepatica, the effervescent saline, is probably used by more medical men for the treatment of their own intestinal ailments than any other medicament known. It is just as good for their patients. It is one of the "best sellers," not of a season, but of almost a generation.

HORLICK'S MALTED MILK

No food for the infant, the delicate patient, or for the convalescent has yet been found that is so delightful to the palate, so satisfying, and so upbuilding, as Horlick's.

Too much cannot be said in praise of this food and in praise of its manufacturers, who have maintained its standard in every package of it sent out in the many years it has been manufactured.

AIDS IN DIAGNOSIS

The Chicago Laboratory was established in 1904, and is now patronized by physicians in all parts of the country. It furnishes all the laboratory aids in diagnosis at fixed prices, and its work is done in a highly scientific manner.

Free bleeding tubes, sterile containers, and culture media, with detailed instructions for their use, are furnished upon application by postal card, letter, or telegram.

This laboratory is located at 25 E. Washington St., Chicago.

ANGIER'S EMULSION

For nearly thirty years the leading medical men of the East and the West have found Angier's Emulsion of unusual value in the treatment of coughs and bronchial affections and for the respiratory and intestinal ills of children; in chronic constipation and in convalescence from typhoid and other diseases involving the mucous membrane.

It is a very valuable remedy in many specific ailments, and all physicians should be acquainted with it.

Full information will be cheerfully furnished by the Angier Chemical Company, Boston.

THE OTTAWA TUBERCULOSIS COLONY

More general, as well as specific, information about the treatment of tuberculosis and the care of tuberculous patients can be had from visits to, or perhaps from the literature of, tuberculosis sanitariums, than from most of the text-books upon the subject. Such sources of information should not be overlooked by the general practitioner.

Among such institutions is the Ottawa Tuberculosis Colony, located at Ottawa, Ill., with offices at 202 South State Street, Chicago. Its conductors, Drs. J. W. and H. V. Pettit, have very high standing among the world's recognized leaders in the care and treatment of the tuberculous; and Northwestern physicians who have sent patients to the Colony speak in the highest terms of praise of the institution.

PREFERRED STOCK OF THE NORTHERN STATES POWER COMPANY

We believe no stock of a private or public-service corporation has been offered in Minneapolis for many years that has received so critical examination by so many classes of business and professional men as the preferred stock named above. These examinations have led to a wide distribution of this high-grade stock; and one can hardly believe its stability can be affected from any source whatever. The company deals in the necessities of modern life,—that is, with lighting and power for public and private uses.

Quarterly dividends have been paid regularly on this cumulative preferred stock for nearly ten years, while the value of the properties back of the stock have continuously and largely increased.

The company's announcement on another page is interesting.

THE ANSWER TO UNCLE SAM

The recent request of the U. S. Public Health Department for co-operative action on the part of physicians in the fight against venereal diseases, brings before the profession a phase of the subject that should no longer be ignored. War upon "segregated districts" and the reclamation activities of social workers have only resulted in the present necessity for drastic action, which proves that a successful issue can be attained only by methods of medication which take the menace out of the "venereal peril." Until recently the profession has been seriously handicapped by having no dependable remedies available for other than temporarily overcoming venereal infection. This has been particularly true of gonococcic infection, with the result that the venereal demon has fastened his fangs into generation after generation of American manhood, menacing the entire noble structure. Now, however, this peril is being successfully combated, according to authentic clinical reports, by Proteogens, a product of the Merrell Laboratories, in Cincinnati, and the response by the medical profession to Uncle Sam's call for help, will be an effective one, if this reliable remedy is employed.

MICAJAH

The doctor of all the people in the world, is in a position to appreciate the value of convenience.

His time is so fully occupied and the calls upon his knowledge and skill so frequent, as to cause him to welcome anything in the nature of a time- or labor-saving device or instrument.

Hence, few physicians hesitate to use what have been called ready-make medicines, in the sense that they are supplied ready for use and do not call for writing or the filling of a prescription. Provided always that the composition of such products is known, and that they are manufactured properly with the view towards

supplying the maximum of efficiency, there is no reason why they should not be employed constantly by busy physicians.

Two examples of such products are Micajah's Medicated Wafers and Micajah's Suppositories. These two preparations have been on the market for a number of years, and have been thoroughly tested in the laboratory, and in clinical cases, and have demonstrated beyond question their practical value.

The literature regarding these products will be sent promptly to any physician who may request it, and will be found to be free from exaggeration or excessive claim.

Samples will also be sent to physicians only on request to the company.

WINTER CHAPS AND IRRITATIONS

Many a doctor, obliged to spend many hours each day facing the cruel blasts of winter, knows only too well the distress and misery of skin chaps, peeling cheeks and cracked lips.

Many different applications have been used to overcome the effects of wind and cold weather, and to increase the resistance of the skin. None has proven more satisfactory than K-Y Lubricating Jelly. Remarkably soothing and softening in its effect, this nongreasy, water-soluble, and colorless product not only allays smarting, burning, and irritation in general, but also contributes materially to healing and the restoration of a natural condition of the epidermis. Well rubbed into the skin of the face and hands before exposure to cold and wind, and immediately on returning indoors, K-Y Lubricating Jelly will go far to prevent wind burn and chapping, and keep the skin soft and pliant.

Briefly, K-Y Lubricating Jelly possesses distinctive emollient properties which enable the physician to relieve, control and overcome a variety of simple skin afflictions, not only with gratifying promptness and efficacy, but with the unquestionable advantages that attend the use of a preparation that is greaseless, water-soluble, and cleanly.

A NEW BULK BACTERIN CONTAINER

The doctor who uses bacterins in quantity will be interested in a new form of bulk container which has been perfected, holding a considerable quantity of the bacterin, 5 mil or 20 mil, and so arranged that any desired quantity of its contents may be withdrawn without danger of contaminating the rest. Various types have appeared, the chief objection to them all being that the perforable cork could be, and was, easily worked loose in frequent handling. This danger is at last eliminated in the excellent container recently announced by The Abbott Laboratories, of Chicago, Ill. The perforable rubber diaphragm is incorporated into the rubber cork, which is inserted tightly into the neck of the bottle. Over this is placed a metal cap, with a single opening through which the needle may be inserted, sealing automatically upon withdrawal, and this cap is then crimped down tightly around the collar of the bottle. It is impossible for it to work loose and would present quite a problem if you were to try to remove it intentionally. Thus is the original sterility of the contents permanently assured. Over all is placed another metal cap, nicely machined so that it fits snugly and presents a pleasing appearance, besides adding further protection.

This container is of a "squat" style so that it will not easily tip over—just another evidence of the painstaking care and minute attention to detail which characterizes its entire construction. The bacterins which The Abbott Laboratories supply in these 5 and 20 mil containers are well known for their purity, sterility and accuracy. A complete list will gladly be sent upon request.

ALKALOL COMPANY

It is not always satisfactory or safe to take the line of least resistance, especially in prescribing drugs or combinations of drugs for therapeutic use.

It is easy to prescribe a hypertonic alkaline solution for use as a nasal douche or spray in cases of rhinitis, coryza, or other inflammation or irritation of the nasal passages, forgetting that the continued use of such a solution defeats the therapeutic object to be secured.

The effect of a hypertonic solution is to overstimulate glands, produce an increase in quantity, but a deficient quality of the secretion, which amounts in many instances to catarrh, and thus leads to an increased liability to further pathological changes in the affected parts. An inflammed conjunctiva, or even cornea, can be treated by a so-called antiseptic solution, but to do so is to overlook the physiological laws which govern the inflammation, whether it be of the mouth or throat, urethra, vagina, bladder or rectum. Inflammation means first of all congestion, loss of vascular tone, followed by an increase in secretion, in an effort to bring about a normal equilibrium. Hypertonic solutions defeat this object, if continuously used. Isotonic solutions simply act as cleansing agents, but hypotonic solutions reverse the osmotic current, with the result that necessary physiological salts are caused to pass into the mucous membrane cells. This supplies the deficiency of secretory elements, feeds the cells, restores vascular tone, is soothing, healing, and in accord with Nature's best laws for the treatment of such inflammations.

An example of a hypotonic solution, which produces such prompt and happy effects is Alkalol, whose hypotonicity assures hyperefficiency, because Alkalol helps the cells to help themselves.

Reason Why Literature and samples of Alkalol will be sent to any physician on request to Alkalol Co., Taunton, Mass.

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SOME OF THE SURGICAL LESSONS OF THE WAR*

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MINNEAPOLIS

Military necessity in this last great war exercised a profound influence on the medical and surgical conditions as found in all the armies abroad. As the fighting was over a terrain which for centuries had been devoted to agriculture and which for succeeding generations had been fertilized to restore the exhausted soil, all the battlefields were reeking with bacteria. Soldiers who, from the nature of the fighting, were obliged to "dig in," and to live in trenches, dugouts, and shell-holes, inevitably were constantly soiled with dirt and mud, their uniforms and skin being always contaminated with pathogenic organisms.

Under such conditions, practically all wounds became septic. Tissues, torn, lacerated, and bruised by ragged fragments of high explosive shell, were always infected; and wounds made by leaden shrapnel bullets also were generally infected. In rare instances, however, some of the rifle or machine-gun bullet wounds were clean. In the fighting where back areas were exposed to constant shell and machine-gun fire, it was frequently impossible to evacuate the wounded except at night, so that the primary dressings were done in first-aid stations, usually in a dug-out close to the front-line trenches. The time elapsing between the receipt of a wound and when operative interference could be properly given was a profoundly important factor in the clinical course of that wound. Practically all wounds being primarily "dirty wounds," of especial importance was the so-called "period of contamination," occupying the first eight to ten hours before the "period of infection" occurred, for, if operation could be performed during this "period of contamination," the best ultimate results were obtained.

Little in the way of formal surgery could be attempted in the first-aid posts. Here the control of hemorrhage, the splinting of fractures, treatment of shock, the application of first-aid dressings, and the administration of antitetanic serum, were about all that could well be done in these advanced stations.

To the end that early operative treatment might be given wounded men, evacuation hospitals (the first place where formal surgery could be done) were established as close to the front lines as was possible and still have them function as hospitals in a zone relatively safe for wounded men. These hospitals were usually from eight to ten miles back of the lines.

The British and the Americans developed the mobile hospital, and the French a unit carried on trucks and called the "Autochir."

These functioned as evacuation hospitals, or as the highly specialized and more advanced hospitals for cases difficult to transport, such as abdominal, thoracic, head, and shock cases. These hospitals were served by "operating teams," which, in times of stress, usually worked in eight-hour shifts, and did a vast amount of surgery.

*A discussion before the Hennepin County Medical Society, February 12, 1919.

All of these advanced hospitals were but an expression of the effort to give the wounded soldier the earliest possible adequate surgical attention.

Evacuation Hospitals, as the name implies, were expected to clear their patients back to the Base Hospitals at the earliest opportunity, the change in patients being so frequent that the wounded remained but a few hours or days in them. Only the cases which could not be safely transported were allowed to remain longer. To the 150 Base Hospitals then, stretching all the way from the advance zone back to the bases on the sea, the wounded were sent, being carried by the superb American, French, or British Hospital trains. Of these the United States had 23, each made up of eighteen cars capable of carrying 600 wounded, wonderfully appointed and modern trains, built for us in England.

The Base Hospitals, averaging from 1,000 to 3,000 beds each, were fully equipped and staffed hospitals, permanently located in schools, hotels, barracks, or chateaux, or else in permanent or temporary type of brick or wood barracks. These hospitals were frequently grouped together on main lines of transportation, and formed "Centers," like that at Allerey, Saone et Loire, where Base Hospital 26 was located, and where there were accommodations for 20,000 sick and wounded men. The American genius for organization found expression in the splendid organization of the hospitalization of the A. E. F. Of mushroom growth, tremendously expanded yet well conceived and carried out, it reflected credit upon the army and the Medical Corps.

Perhaps in no phase of surgery has such radical change of procedure been noted as in the treatment of battle wounds, the present-day treatment being the evolution and crystallization of the observations and experiences of the surgeons of the armies of the Allies during four years of war. In the early years of the war, the omnipresent infections sent the surgeons groping for agents to combat them. The chemical sterilization of wounds had a vogue, and we heard much of the relative merits of Carrel-Dakin's treatment, of Di Chloramine T, "Bip," Eusol, Hypertonic Salt Solution, and others of lesser prominence. As the war progressed, however, the conviction was borne in upon the military surgeons that it was not so much the method of chemical sterilization of wounds resorted to which gave the best results, but, rather, the primary method of surgical treatment which in large measure determined the rapidity and completeness of final healing. So strong was this conviction that now the method of "debridement" is uniformly resorted to in all the Allied armies.

Given a wound primarily infected, with tissues bruised, torn, and devitalized, and frequently harboring dirty foreign bodies, debridement of these wounds should be done as early as feasible, during the period of contamination if possible. The whole wound area is cut away, all lacerated bruised tissues being removed until healthy normal tissues are encountered, tissues which have the power of resistance and regeneration.

The foyer of the wound is left wide open, and the wound dressed by the method elected by the surgeon. Most American surgeons preferred the Carrel-Dakin treatment or the use of Di Chloramine T.

Unless the wounded soldier was to remain under the care of the surgeon who had done the debridement, primary suturing was not done; indeed, orders were issued against it, for the suturing might seal up infection in the wound of a man who for days might be unable to get further surgical attention.

When the wounded man arrived at a Base Hospital, his wound secretions were studied by cultures and smears. If no streptococci were found and if but one organism to five fields (twenty fields were studied) for three days, then his wound was closed; if operated on within four or five days after its receipt, a delayed primary closure was done, or, if later, a secondary closure was made, then the granulation tissue covering the wound surface was removed and the skin edges were freshened and undermined if need be, then closed like a primary wound, and the part put at complete rest.

Some of us were privileged to watch the famous French military surgeons in the great Evacuation Hospital center at Beauvais, where sixteen French hospitals served the sector south of Amiens and east of Montdidier. The radical methods of these surgeons were impressive. They opened very freely, and practiced extensive debridement of all wounds, even the machine-gun bullet wounds through and through the soft parts, after which the wounds were scrubbed with ether. These surgeons had learned to be radical in the hard school of war, and now attributed their success to going wide of any traumatized tissue.

In thoracic surgery rapid strides have been made during the war, and a constant lowering of

the mortality-rate has resulted from the lessons learned. Where early, unoperated chest injuries gave a mortality of 30 per cent, now interference has reduced the mortality-rate to 10 per cent.

In the "stove in" chests and the "sucking wounds" of the chests, shock is a serious factor and must be combated early. Operative interference is always called for, and must be done early, for it is necessary to relieve the pressure from depressed ragged ribs and to stop the aspiration of the "sucking wounds." All chest wounds, as well, should be closed at once. The Italians devised a pneumatic bag to be used as a diaphragm temporarily in some of the very large wounds where the chest could not be immediately closed.

In thoracic wounds involving the pleura or lungs, the same principle of debridement obtained as in other wounds. Injured tissues, clothing, fragments of ribs, bullets, or shell fragments in the pleura or readily accessible in the cortex of the lung, should be removed at once, the bleeding from the lung controlled, the toilet of the pleura made, and the wound of the chest wall closed. If pneumothorax or hemothorax occurred, repeated aspirations were done.

The development of lobectomy has progressed. Where it was done for the relief of gas infection of the lung, it was uniformly fatal.

Foreign bodies lodged in the lung and giving few late symptoms, were not removed, for they were found to be well tolerated.

In empyema chemical sterilization of the cavity by Carrel-Dakin tubes and fluid was done, after which the sinuses left by the tubes were debrided, and the chest wall closed. As in civil practice, decortication of the lung was occasionally necessary to permit of its mobilization.

Local anesthesia and gas and oxygen proved especially valuable in this type of surgery.

As had been noted in other recent wars, the success or failure of operative interference in abdominal wounds depended largely upon how early they were received for operation. With no facilities for this type of exacting surgery, the first-aid stations could do little for the wounded except to treat them for shock and send them back as early as possible. Shock and hemorrhage were responsible for much of the early mortality. Fortunately, the abdominal wounds represented but 2 per cent of all wounds.

When these patients were received at Evacuation Hospitals within eight to ten hours after being wounded, operative interference offered some hope of success; when they were received later, the elapsed time was the factor which militated against successful surgery.

Then the resort was to opium, the Fowler position, withholding food and drink, allaying thirst by mouth-wash and rectal drip, all attempting to tide them over for late operation.

In this class of cases, as in the head and thorax cases, the special mobile hospital, far advanced in some sheltered spot, proved of tremendous value, for it helped save the most precious asset in abdominal cases—time.

It was in the wounds of the major joints that the most radical changes in treatment were noted. Other wars and civil surgery had bred a wholesome respect for infected joints, so now the battle wounds of shoulder, knee, and elbow-joints were noted with interest. In instances where the great joints had been invaded and opened up by bullet or shell fragment, but where the bones forming the joint had escaped fracture, many French, British, Belgian, and American surgeons daily flushed the joint cavity with ether, and left it wide open, commencing passive motion very early, sometimes within the first twelve hours, permitting their patients to get up on their crutches early. Another school resorted to cleansing the joint cavity with normal salt solution, dissected out the tract of the wound, and sewed up the joint capsule tight, left a drain down to it, then closed the other tissues, applied extension, and aspirated the joint cavity as needed. Passive motion was resorted to relatively late. Both methods of treatment seemed about equally successful.

It is interesting to note in the French Evacuation Hospitals in Beauvais, the very radical treatment of knee-joints, where the condyles were fractured or guttered by a missile. Here we noted they removed the condyles wide of the injury, flushed the joint with ether, stitched the capsule, and drained down to it. We were shown a series of radiograms illustrating the partial reproduction of condyles which had been so extensively removed.

Some of the most fatal types of injuries we had to deal with were infected fractures, involving joints which, as well, became infected. A large percentage of amputations followed this type of injury.

Perhaps no type of casualties was so brilliantly handled as the fractures. Inevitably they formed a large percentage of all casualties and presented a problem of transportation and splinting of great importance. Early the femur

fractures gave a very high mortality following transportation to the rear. Broken and jagged bones were imperfectly immobilized. Their movement in carrying greatly increased the trauma to the wound and also the shock. Such surgeons as Robert Jones, of Liverpool, and Goldthwaite, of Boston, and their colleagues, did much to organize and train the Medical Corps and bearers in the use of the Thomas, Cabot, Jones, and other splints. Stretcher-bearers were trained in the application of these splendid splints, and they carried them with them even into "No-man's Land," saving untold suffering and many lives. Distinctly creditable was the treatment of fractures in the A. E. F. The wounded came to the Base Hospitals well splinted and well dressed.

Most of the compound fractures were infected. One school removed all loose fragments of bone; the other removed only free fragments, leaving those with a periosteal attachment. These cases presented the secondary problems of bone-infection, osteomyelitis, sequestration, and delayed and non-union of fragments. They, alike with all other wounds, were subjected to debridement and chemical sterilization. The use of the Balkan frame was universal, while the Thomas, Hodgen, and Smith splints were generally used. The suspension treatment of fractures in these splints was in universal favor in France.

Where so many wounds were infected, secondary hemorrhage was not an uncommon sequence. Primary trauma to the blood-vessel walls with a superimposed infection was responsible for their rupture. Many "blow-outs" of arterial walls were found to be due to multiple tiny abscesses in the media of the arterial wall, which weakened the wall and invited its rupture.

With so many bone injuries the incidence of nerve involvement was high. The war brought out no unusual line of treatment in this class of injuries, except that repair should be done early upon receipt of the wound or delayed until the wound was clean.

The ever-presence of shock following the wounding of exhausted men constituted one of the greatest problems met in war surgery. It was combated by heat, in special shock beds, or in shock wards, by morphine, transfusion, salines intravenously, enematas of sodium bicarbonate and glucose, 2 per cent sodium bicarbonate solution intravenously, and by rest. The problem was attacked from every angle by such men as Crile, Cannon, Porter, and Bissell; and their observations were given to all the medical officers in the A. E. F. by bulletins.

With the fertilization of the land, the bacilli of tetanus and of gas (Welch) were ever present. Tetanus was splendidly combated all along the line; however, as all wounded men were given antitetanic serum almost immediately in the front-line stations, the injection was recorded on their field medical cards before they were sent back. If it was not so recorded, the injection was given at the next station, usually the Evacuation Hospital. The danger from delayed tetanus was found to be great in secondary operations required for the late removal of foreign bodies, a definite percentage of which were found to be infected with the organism. Always before these secondary operations the antitetanic serum was again given.

Gas-infection from the Welch bacillus, one of the horrors of the earlier months of the war, had, in a large measure, disappeared with the careful and thorough debridement of all infected and devitalized tissue. It still, however, was encountered often enough to put all surgeons on their guard against it, and the evidences of gas in the tissues immediately called for the most radical surgery to combat it. In many cases nothing short of amputation would save the patient; in others extensive incisions with the most radical possible removal of all infected muscles and fascial planes, followed by wide-open wounds and the Carrel-Dakin treatment would sometimes save a limb. The tendency was to amputate after the guillotine method, leaving the wound wide open. Some surgeons appreciating, however, that the skin had a high resistance to the infection, made skin flaps and left them wide open. This procedure later simplified the covering of the stump.

The organization of the Medical Service of the A. E. F. in France was ably undertaken by the Chief Surgeon, General Ireland, who had the assistance and co-operation of many of the most representative professional men that America has produced. To the honor of the profession, a higher percentage of doctors flocked to the colors from the United States than was represented by any other one profession, so the men whose names were household words in medicine were many of them found filling positions of responsibility in France. A system of consultants was organized, with General Finney as Chief Consultant in Surgery and General Thayer as Chief in Medicine. All the specialties were represented

by distinguished men who directed and supervised the work of the officers in trench, camp, and hospital.

Mobile, highly specialized "operating teams" were organized in large numbers, teams which could be sent from place to place in time of need. Shock teams were developed, groups of officers, nurses and men being taught the technic of transfusion and treatment of shock. Gas teams, as well, were developed to combat that most brutal of war injuries.

Through the auspices of the Red Cross, a medical society was inaugurated and met once a month in Paris. Here congregated those officers who could be spared, and here was exploited all that was new and valuable in war surgery. The surgeons of the Allied army, as well as of our own, contributed largely from their vast experience. Frequent bulletins, pamphlets, and orders disseminated throughout the army gave the most recent observations on all medical war conditions.

From a medical standpoint, America's contribution to the war has written one of the proud pages in her professional history, a recital of unselfish devotion, gracious self-sacrifice, and scientific attainments, which measured up to the highest standards set by the disciples of Aesculapius.

THE TREATMENT OF HYPERTROPHIC STENOSIS IN INFANCY*

By Olin W. Rowe, M. D., and Wm. A. Coventry, M. D., F. A. C. S.
DULUTH, MINNESOTA

One of the first papers read by one of us before this society was on the treatment of hypertrophic stenosis in infancy. At that time a small number of cases which had been under medical treatment were discussed, and a method of treatment advised. Two years ago, in discussing a paper by Dr. J. P. Sedgwick,[1] presented before the Minnesota State Medical Association, the same treatment was advocated. At that time the mortality rate following operation was still high; and our experience with twenty cases treated medically without a death was our basis for argument. A number of our patients, however, had a prolonged hospital residence. Their progress was often very slow, and at times so discouraging that other procedures were sought.

Holt,[2] in a masterly discussion of the entire subject, concluded that "all of those who do not improve under such treatment (medicine) in the course of two or three weeks, should be treated surgically; with the more severe types only a short delay is permissible." This statement, with a study of the data on which it was based, was influential in determining our course here.

The data which form the basis of the present paper have been obtained from a study of the cases observed in this clinic during the last seven months. During this period twelve patients have been treated: all cases have had some medical treatment; and five have been operated on.

*From the Duluth Clinic. Presented before St. Louis County Medical Society, January, 1919, and submitted for publication February 7, 1919.

MEDICAL TREATMENT

The medical treatment advocated has been previously discussed in detail. It has been essentially as follows:

All children were fed every four hours after admission, and continued on that interval with one exception. Breast milk, occasionally skimmed, sometimes iced, has been the food of choice. It is always fed slowly, occasionally by a dropper, and in severe cases by tube following lavage. Water was given freely by mouth in all cases; hypodermoclysis was used once; and on several occasions interaperitoneal injections of physiologic sodium chloride solution were made with excellent results. Five of the last-named patients were offered the farina mixture described by Sauer.[3] The weight was taken daily, and was the most important factor in determining the progress made.

When medical treatment proved unsuccessful or inadvisable, the patients were operated on. The symptoms that demand surgical intervention are rapid loss in weight, persistent forcible vomiting, and active gastric peristalsis.

Before discussing the operation let us consider the preoperative treatment.

PRE-OPERATIVE TREATMENT

For many valuable suggestions on both the pre-operative and the post-operative treatment we are indebted to E. A. Morgan,[4] of the Babies Hospital, New York. This author calls atten-

tion to the fact that, "the metabolic processes of the children have been in abeyance, and the subcutaneous fat has been depleted by several weeks of starvation. The facility with which they develop a subnormal temperature may be readily understood; and it has been our experience that a sudden loss of body-heat has, in some instances, been the undoubted cause of collapse occurring a few hours later."

Each patient is fed on the schedule found most advisable to within a few hours of the time of operation, when the child is subjected to gastric lavage to remove all food and gas. The limbs and chest are wrapped in absorbent cotton, which is bandaged on snugly, and the patient is carefully protected from cold while on the way to the operating-room, and thereafter. The operation is done on a warm table in a warm room. Ether is the anesthetic of choice.

No stimulant of any kind is given previous to the operation. Camphor was given once in our series during the operation. Physiologic sodium chloride solution was injected into the peritoneal cavity in some cases before closing the wound.

SURGICAL TREATMENT

In this series of cases we have done the typical Ramstedt type of operation, making special effort to extend the incision to the mucous membrane beyond the dense mass to the duodenal, as well as to the gastric, normal tissue. There is only slight bleeding, and that is of no consequence.[5] In fact, this slight bleeding is to be desired, as the resulting clot partially closes the gap, and prevents the occurrence of a hernia in the mucous membrane. The omentum is then tacked over the incision by four interrupted catgut stitches, and the pylorus is dropped back into the abdomen.

The abdominal wound is closed by the layer method, but silkworm gut sutures, about one centimeter apart, are passed through the skin, fascia, and muscle. These sutures are not removed for at least two weeks. This feature in closing was brought forcibly to our attention in the first patient operated on, as will be noticed by the history.

We prefer the Ramstedt method because we believe it is more rapid and can be done without any special instruments. We prefer this method to gastro-enterostomy on account of the shortness of time it requires, and the lessened shock to patient. The exposure of the intestines and stomach and the length of the anesthesia are great elements in shock in these frail babies, and in the Ramstedt type of operation, we believe, these measures are minimized to the greatest degree.

POST-OPERATIVE TREATMENT

In the post-operative treatment the most important factor is the maintenance of body-heat. Absorbent cotton, wrapped about the body, is of great assistance. Warm blankets and hot-water bottles are always used. The temperature of the room is held at 70° F. A thermometer is kept in the basket, and the temperature of the baby is taken frequently.

The most careful observation is essential. Hypodermic stimulation has so far been unnecessary, and resort to it is to be deplored; but intraperitoneal injections of physiologic sodium chloride solution have been used daily in the severely dehydrated cases. Old brandy (diluted) was given in one case. Transfusion of blood from the mother was used with excellent results in one of our cases in which there was a slow seepage of blood from the wound.

The post-operative feeding is most important. The time of offering the first food, the food offered, the intervals, the dosage, etc., demand careful study. A slight error may precipitate a digestive disturbance which would be difficult or even impossible to control. Our practice is to offer water by dropper as soon as the patient has recovered from the anesthetic and the first shock of the operation. This is usually within an hour, at which time the patient usually looks better than before the operation. If this is retained, as it usually is, a small amount of diluted breast milk is offered by the same means. Water is again offered after a short interval, increasing the amounts cautiously at first, but freely during subsequent days. The food should be increased with extreme caution. A too rapid increase will always precipitate vomiting. A gain in weight before the caloric requirement has been reached has occurred in most of our cases. One factor in this gain may be the introduction of fluid intraperitoneally.

CASE-HISTORIES

In the following histories only one case treated medically throughout is offered. This illustrates the customary treatment and the results to be expected in favorable cases. The case coming to autopsy is also offered, as it illustrates the presence of other congenital conditions. The cases treated surgically are given in detail.

1. (Medically treated) Robert, James M., 9/22/18. Born 7/13/18; birth-weight 10½ lbs.; first child. Has had the breast only, at intervals of from 2 to 4 hours, depending on physicians previously consulted.

Examination: Thin, large-boned. Weight, 4,230 grms. Large peristaltic waves from left to right continuously during examination. No tumor palpable. Projectile vomiting following feeding in office. Two ounces of dilute breast milk were offered by dropper q. 4 h.; vomited after every feeding. Weight, 9/23/18, was 4,160. Lavage and gavage at alternate feeding for twenty-four hours. There was no decided decrease in vomiting. Weight the following day, 4,100 grms. Lavage and gavage at every feeding. Milk could always be removed by tube. Gradually vomiting decreased on this treatment, and at the end of two weeks a gain of 60 grms. was noted. Gavage was then omitted for four days, feeding by dropper being substituted; the child vomited twice. Child was put to the breast twice daily, and promptly vomited after each nursing. This was persisted in, however, and during the next thirty days the number of daily nursings were increased. The gain in weight at the end of that period was 920 grms.

2. Carl L., Two Harbors, Minn., 4/1/18. Born 2/26/18; first child; birth-weight, 7¾ lbs.

Complaint, vomiting after almost every meal; loss of weight.

Examination: Weight, 3,270 grms. Umbilical hernia. Tumor size of hazelnut under liver, right nipple line, level of umbilicus. Marked peristaltic waves.

Treatment: Lavage twice daily. Expressed breast milk q. 4 h. from bottle; later by dropper. Vomiting continued. Lavage and gavage (breast-milk) q. 4 h. for several days without marked results. At this time we were fortunate enough to have the baby examined by, and received suggestions from, Dr. H. F. Helmholz, of Evanston, who described the then unpublished work of Sauer on the farina treatment. The child was offered this food, with the result that the vomiting lessened, and at the end of two weeks was occurring only once daily. Weight, 3,005 grms. (There was no loss after establishing the farina treatment.) The mother insisted on taking the baby home.

April 24th: Mother brings the child back, greatly discouraged. Child will retain four or five feedings, and then vomit entire amount taken. Greatly dehydrated.

Operation, 4/24/18. Typical Ramstedt done by Dr. Coventry. Pylorus, hard, cartilaginous, about 1½ inches long, and size of finger. 120 c.c. physiologic sodium chloride solution in abdomen before closing.

April 28: While dressing the wound the patient cried, and the entire wound opened. Intestines replaced within abdomen with sterile towel and held while anesthetic was given. Interrupted sutures of silkworm gut used; through-and-through stitch. Secondary union perfect.

April 29: Patient takes the breast well and is gaining in weight.

May 21: Weight, 3,910 grms. (Gain 940.) General condition excellent.

3. Herbert C., referred by Dr. G. N. Butchart, Hibbing, Minn., 4/18/18. Born 3/10-18; birth-weight said to be 16 lbs. Eighth child, five of the eight are dead. A nineteen year old sister died of tumor of the brain (a positive Wassermann); 1 still-born; 1 meningitis; 2 in infancy of digestive disturbances.

Complaint: Continuous vomiting; rapid loss in weight.

Examination: Weight, 3,600 grms. Extremely emaciated. Head retracted. Abdomen greatly distended. A large tumor in right lower quadrant, about 3x2 inches. Tumor size of hazelnut under margin of liver, right side. Peristaltic waves on manipulation. Child in extremis. Referred to hospital, where physiologic sodium chloride solution was injected intraperitoneally. Death occurred on the following day. Autopsy performed by Dr. C. A. Scherer.

Autopsy fourteen hours after death: small, extremely emaciated infant; length, 57.5 cm.; skin, loose and inelastic; some hypostatic congestion over the back; abdomen, hugely distended; umbilicus, protruding; rigor mortis, slight. On section subdermal fat greatly reduced; no bleeding. Thoracic examination, negative except that diaphragm is forced up and heart pushed to left and upward. In the abdomen a large mass filled with fluid is present in upper right quadrant. Stomach, large and evidently distended; bulges under liver. Removal of latter shows that it is thin walled and contains a small amount of mucus mixed with food; capacity, about 200 c.c. At pylorus is a hard, grisly tumor, about 3 cm. long and 2.5 cm. in circumference; on section cracks under knife. Mucosa readily separated from tumor mass. Lumen admits bristle probe. Small intestine, negative. In large bowel four separate and distinct constrictions were found: one in the ascending colon in the region of the hepatic flexure, 7 cm. long (lumen admits ordinary probe); a second in the middle portion of the transverse colon 5 cm. long (same caliber); third at splenic flexure, about 2 cm. long (admits bristle); and the fourth just above the sigmoid, about 10 cm. long (with lumen admitting goose-quill). The mass in upper right quadrant of abdomen was found to be a multi-locular cystic kidney, the cysts containing about 500 c.c. of yellow clear fluid, which was evidently urine. The largest of the cysts was oblong, about 15 cm. long by 10 cm. in circumference. Very little normal kidney tissue found. Brain, negative.

4. Andrew G., Coleraine, Minn., referred by Dr. J. D. Caldwell, 6/15/18. Born 5/11-18; birth-weight, 7½ lbs.

Complaint: Loss in weight; vomits constantly; constipated.

Examination: Palpable tumor, right side, level of umbilicus. Weight, 2,785 grms. Marked peristaltic waves. Referred to hospital, where two ounces of farina mixture were offered immediately. There was no vomiting, but the entire amount was removed by tube after six hours. This was repeated with the same results. This fact, when considered in connection with the large tumor and the treatment received before the patient came to Duluth, made operation seem advisable. Operated on (6/15/18) by Dr. Coventry. Right upper rectus incision made. Ramstedt incision of pylorus, which was hard, 1½ inches in length, the size of thumb. Gaping wound covered with omentum. Patient left table in excellent condition.

June 25: Weight, 2,955 grms. Baby vomited two or three times after the operation. Has retained all

food since. Progress uneventful. He gained 660 grms. in the next fifteen days.

5. Lloyd S., Moose Lake, Minn., referred by Dr. Anderson, 6/27/18. Born 5/5/18 birth-weight said to be 9½ lbs.

Complaint: Vomits after every meal; losing in weight; bowels move irregularly (several times some days and then goes several days without a movement).

Examination: Weight, 2,900 grms. Palpable tumor in right nipple line size of a pea, hard and firm. Peristaltic waves.

Röntgen Examination: Child was offered two and one-half ounces of barium solution. After four hours about three-quarters of solution still in stomach; at six hours a rest of practically one-half of amount remained. Referred to hospital to receive the usual medical treatment. During next four days lost 305 grms.; looked much worse; vomited continuously. Practically all of breast milk may be removed from the stomach after a period of four hours.

Operated on (7/1/18) by Dr. Coventry. Typical Ramstedt, followed by injections of physiologic sodium chloride. Weight, 7/3/18, 2,690 (G. 95). No rise of temperature during the night; vomited twice. Baby discharged 7/22/18; weight, 3,410 grms. (gain, 720).

6. Edward C., Morgan Park, referred by Dr. Ryan, Morgan Park, 9/3/18. Born 6/25/18; birth-weight, 7 lbs.

Complaint: Began vomiting at two weeks, and this has continued at least once a day. Has been getting gradually worse. During the last nine days has vomited after every meal. Is said to have lost two pounds in last week. Lavage was practiced by Dr. Ryan, and expressed breast milk diluted with water was fed.

Examination: A poorly nourished child. Weight, 4,190 grms. Small tumor in right nipple line. No wave seen, although examination was continued for more than two hours, with the stomach empty and filled. Farina mixture offered.

(9/4/18), weight 3,980 grms. Extremely pale (hemoglobin 20). Has had only three feedings of the farina mixture, which may account for the loss in weight. Peristaltic waves visible almost continuously. Thinking that the condition was a moderate stenosis, accentuated by a very marked spasm, other measures were instituted for controlling this condition. These proved unavailing. The child was rapidly becoming dehydrated and approaching collapse. Physiologic sodium chloride solution injected intraperitoneally.

9/5/18, child appears very weak. Respiration difficult, air hunger. Operated on (9/5/18) by Dr. T. L. Chapman. Typical Ramstedt made, plus physiologic sodium chloride in abdominal cavity. Following the operation the child suffered from shock, was extremely pale, and had difficult respiration and air-hunger. A slight discoloration from seepage from wound. 180 c.c. of mother's blood injected intravenously with excellent results. Discharged 9/15/18. Weight, 4,385 grms. (gain, 120 since operation). No vomiting. Hemoglobin 60.

7. Jewel W., 10/21/18. Born 9/26/18; birth-weight said to have been 3½ lbs.; eight months term.

Complaint: Vomiting began two weeks after birth, and occurs immediately after feeding. Mother thinks child vomits all she takes.

Examination: Weight, 2,490 grms. Small, emaciated infant. Skin, very dry and harsh. Marked peristaltic wave. Tumor not felt. The child was sent to hospital, where an attempt was made to feed it by the farina method of Sauer after lavage. The infant lost continuously under this treatment, and was therefore operated on on the third day by Dr. Coventry. The usual feeding methods were employed, and the child gained regularly for one week. At the end of the second week the child was put on buttermilk mixture, on which it gained slowly.

COMMENTS

In reviewing our histories it may seem that some of the patients were operated on without giving medical treatment a sufficient trial. The referred cases, however, had intelligent treatment for varying periods before coming under our observation. In Case 2 it is very probable that the farina treatment would have been successful had we been able to keep the child in the city. In other cases of approximately similar nature the patients have responded nicely to this treatment when under constant observation. The ease with which this food is obtained and prepared, the simple feeding technic, and the satisfactory results, make it a distinct addition to our medical treatment.

In the severely dehydrated patients the intraperitoneal injection of physiologic sodium chloride has given excellent results.

Röntgen-ray examination is unnecessary, offers an added strain to the already weakened condition, and affords no data not readily obtained by other means. These same objections apply to the use of the duodenal catheter.

We realize that we are singularly fortunate in all of our uncomplicated cases, for, whether treated medically or surgically, the patients are alive. For this we are greatly indebted to the physicians referring the cases. The early age at which the babies were seen was of course the important factor.

While the immediate risk with patients treated surgically is considerable, it is to be remembered that medical treatment is also not without danger, and at times presents exceedingly difficult problems, often very discouraging. At least two weeks elapse before, even in the mild cases, the patient can be discharged; the more severe cases require careful treatment and observation for months. In one of our recent cases the patient treated medically had a hospital residence of nearly one-half year. At the end of three months, following an otitis media, the patient's weight was 330 grms. less than when admitted. While progress during the next three months was

all that could be wished, it was extremely difficult to protect the child from infection, particularly of the respiratory tract, and from accidents which will occur in the best regulated hospitals.

CONCLUSIONS

1. Medical treatment should be offered in all cases of congenital hypertrophic stenosis until it has been definitely determined that surgery is necessary.

2. The farina treatment described by Sauer is of distinct value in selected cases.

3. The symptoms which demand surgical intervention are rapid loss in weight, persistent forcible vomiting, and active gastric peristalsis.

4. The Röntgen-ray and the duodenal catheter reveal nothing not easily discovered by simple physical examination, and are not without danger.

5. The simple operation of Ramstedt is the operation recommended.

6. Careful preparation and postoperative treatment are essential.

7. The existence of other congenital conditions must be kept in mind.

We wish to express our thanks to Drs. T. L. Chapman and C. A. Scherer for assistance with the patients and for many timely suggestions.

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BACTERIOLOGY OF THE PRESENT OUTBREAK OF INFLUENZA AND PNEUMONIA*

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Since 1892 influenza was taught to be associated with the bacillus of Pfeiffer, and, as it has often been isolated from the sputum and nasal discharges of sporadic cases since then, it was not thought possible for any other organisms to cause the disease. With the disappearance of all the after-epidemics of the 1890 decade the findings of the Pfeiffer bacillus became less frequent, and it was thought that the race was becoming immunized, owing to the wide prevalence of the disease, and that the bacilli tended quickly to disappear from the sputum. Modern bacteriologists, however, as a result of work which they did, declared that influenza was not always caused by Pfeiffer's bacillus. The members of the old school maintained that the new pandemic was not true influenza because Pfeiffer's bacillus was not always present. Pneumonia and bronchial infection were reported as very prevalent in military hospitals in France and England in December and January, 1917, and, in a vague way, they were described to be of a coccal, possibly a pneumococcal, origin. A similar outbreak occurred in Vienna, but no bacillus influenzæ was found. A very fatal purulent bronchitis was reported from French hospitals in 1917 during the winter and again in the fall of the same year, and pneumococci were described as very abundant in the cultures from the lungs and the sputa. In the three years, 1915-17, inclusive, diplococci were the predominating cause of infection in influenza-like outbreaks, but the various strains were not identified. A review of the British literature shows that bacillus influenzæ was doubtfully reported by some investigators, and was undoubtedly present in some groups of cases; but, while two types of cocci predominated, no definite conclusions could be drawn. The Germans have worked very hard to bolster up the Pfeiffer-bacillus theory, but even they have had to admit that bacillus influenzæ is usually absent from the organs at autopsy, and that a diplostreptococcus is more often present. The disease was brought to this country by ships in March, 1918, but did not assume a serious character until September.

A great deal of work has been done in laboratories and hospitals both in this country and in Europe. The most valuable reports have been those obtained from army and civil hospitals. Nuzum, Pilot, Stangl, and Bonar, working in the Cook County Hospital in Chicago, have re-

*Read before the Grand Forks (N. D.) Medical Society January 9, 1919.

ported, as a result of over 3,000 cultures, that the pneumococcus was the predominating organism found in swabs made from the nose, pharynx, tonsils, and sputum of pneumonia patients. German writers report that Pfeiffer himself found his own form of bacillus in but few of the cases under his observation. It has been the experience of the Chicago workers that pneumococcus Type IV is most often present. Bacillus influenzæ was never isolated in lung cultures during life. Pneumococci of especial virulence characterized the Chicago outbreak.

At Camp Meade the report on the bacteriology of the outbreak there showed that 87 per cent of the cases were caused by a green-producing streptococcus. Influenza bacilli were also obtained in 58 per cent of the sputum cultures.

At Camp Grant it was reported that the influenza bacillus played no part whatever in the epidemic, and that a virulent strain of pneumococcus was the principal organism found; and it has been suggested that the leukopenia characteristic of this disease accounts for the great mortality in the resultant pneumonia.

At Camp Custer a great deal of work was done in a hurry, as the amount of sickness was great and came on suddenly. Pneumococci and streptococci of various kinds were isolated from the sputa. At autopsy, cultures made from organs gave a predominating growth of streptococci, both hemolytic and non-hemolytic, in about equal numbers. Type II of pneumococci predominated. The occurrence of such a variety of organisms leads one to think they are secondary invaders and are due to the great lowering of resistance caused by the influenza.

At Camp Fremont, on the other hand, the bacillus influenzæ was isolated from the nasopharynx in 25 per cent of cases; and 27 per cent of these cases developed pneumonia. The influenza bacilli were obtained in cultures from the lung in the pneumonia cases, but they were always associated with other organisms. The workers at this camp were quite disappointed with the results obtained from all their labor. They conclude that the presence of the bacillus influenzæ in so many cases is but a coincidence, and that the real organism causing this disease as manifested in the present outbreak is as yet unknown. However, they conclude that the lobar pneumonia is due to pneumococci, Type IV, and to streptococci, the bronchopneumonia to the bacillus influenzæ.

In view of the experience of workers in this country it is of interest to note that an English committee reported to the War Office in October, 1918, that "there was considerable doubt in their minds as to the primary etiological activity of Pfeiffer's bacillus in the present epidemic," and they strongly suggested that "some as yet undiscovered virus is responsible for it, but that pneumococci and streptococci are responsible for the accompanying complications. If vaccine was to be used, it should be composed of the three organisms, influenza bacilli, four types of pneumococci and two types of streptococci, these organisms to be isolated from recent cases occurring in the locality in which the vaccine was to be used."

The results of the abstracts of English and German literature support the conclusion that we do not understand the true nature of the condition we now call "epidemic influenza," and there is not sufficient evidence to regard any one of the different forms of bacteria found in the respiratory tract of these cases as the primary cause.

The Influenza Committee appointed by the American Public Health Association at its last meeting must have been influenced by the experiences of those working in Europe as much as by the evidence produced at home when they brought in the following statements: "The micro-organism or virus responsible for this disease has not yet been identified. There is, however, no reason for doubting that such an agency is responsible for it." "It has not been definitely established that the prevailing disease generally known as influenza is the identical disease heretofore known by that name, nor has it been definitely established that all preceding outbreaks of disease styled as 'influenza' have been outbreaks of one and the same malady." "There is no known laboratory method by which we can diagnose a case of influenza from a bad cold or bronchitis, or determine when a patient suffering from influenza no longer is infectious."

In regard to the use of vaccines: Assuming that the cause of the epidemic is an unknown virus, it does not seem possible to prevent the primary disease by vaccination with known organisms. Against the secondary infections, however, there is at least a theoretical basis for the use of vaccines. Because of the demonstrated variety of infection in different localities, it is not feasible to advise the use of a stock vaccine. So far where the results of inoculation have been properly controlled no great advantage can

be seen from their use, especially as they have been used for the most part after the disease has broken out, and large numbers of people have been exposed.

The committee also recommended that until such time as the efficiency of prophylactic vaccination against influenza is established, vaccine, if used, should be employed in a controlled manner under conditions that will allow a fair comparison of the number of cases and of deaths among vaccinated and non-vaccinated groups; and special attention should be directed to securing data as to the period in the epidemic at which vaccinated and non-vaccinated persons developed the disease.

Since writing the above, THE JOURNAL-LANCET for January 1 has come to hand, and in it the bacteriologist of St. Barnabas Hospital, Minneapolis, reports a series of cases which he examined. He is inclined to think that the bacillus influenzæ is the causative agent in the cases which were treated in that hospital.

SUMMARY

The actual causative organism of the present outbreak of influenza has not as yet been isolated.

The use of stock vaccines is not advisable.

The use of any vaccine should be thoroughly controlled by keeping complete records of the results amongst the vaccinated, as well as an equal number of non-vaccinated, persons.

THE ALL-YEAR-ROUND PUBLIC SCHOOL PLAN FROM THE NEUROLOGIST'S POINT OF VIEW*

BY W. A. JONES, M. D.
MINNEAPOLIS

The "modern" child is a composite of fragments derived from the lost energies and wasted efforts of his ancestors. The cement which holds this composition together is made up of inherent traits, inherent mental or nervous defects, poor anatomical structures, uncertain physiological conundrums, and a heterogeneous chemistry. This child was born in modern times; and, unfortunately, the past, present, and future decades have been, and will be, filled with excitement, restlessness, and disease. Under such conditions, if these statements be true, it seems a wonder that a few apparently sound and healthy children come into the world. The influence of heredity and environment and imitation under such strenuous conditions, is a great factor in the breakdown of the individual at certain critical stages.

The physician who sees children born of parents who have been developing in the past two decades, is so accustomed to malformations and defects that he is not surprised that environment and influence play such an important part in the life of the child, nor does he speculate upon the possibility of removing these disastrous conditions, because he is handicapped on almost every side. The majority of children scantily endowed with good structures are enveloped by dense fogs, by the lack of intelligent care, the lack of discipline, and the improper surroundings in which they are reared; and in the end or in the height of their career they display their physical or mental disqualifications. It is not strange, perhaps, but it is true, that the parents are largely responsible for much of the disorder and disease which falls to the lot of the growing child, and, therefore, it is not unexpected that the child should display nervous and mental instabilities, which finally break down the barrier between health and disease.

At this time in the world's career the neurotic is in the saddle; and this fact is intensified by the glamour and strenuous life led by the majority of people. Consequently, in early child life we encounter communicable diseases which might be avoided, and which, unfortunately, if contracted, add to the flame of the oncoming nervous crisis.

There are many causes, perhaps, aside from the lack of parental care and discipline, such as alcohol in the parents, by which their virility and vitality are reduced at the time the child is conceived; and yet, in spite of this provoking cause, some children escape its baneful influence. The infectious disorders of childhood are responsible, not only at the time, but for years afterward, for the development of nervous and mental inequalities; and these diseases or disorders appear in children that are seemingly healthy, before they have contracted an infectious disorder. And yet the physical or chemical or physiological inheri-

*Presented before the Hennepin County Medical Society, February 3, 1919.

tance is brought out by a seemingly simple communicable disease. Many cases of chorea, hysteria, neurasthenia, psychasthenia, multiple scleroses, and other structural nervous disorders may be traced to an infectious disease in childhood.

Added to this disqualification are the strains of many wearing and annoying factors which can be easily discerned in our present status. These conditions may apply equally well to those children who have been brought up under the most careful regime, and it illustrates the case in point still further and shows definitely that concealed defects are apt to crop out at the most unexpected moments.

Considering the poor balance which these children inherit or acquire, it is not strange that the present system of education should simply add to the trials of growth and development. The parents are too anxious to put their children into school, first, because they believe that the atmosphere is good for the growing child; secondly, because they have a theory that the education of the child should begin at a very early period; and, thirdly, and perhaps not least, is the willingness to transfer the responsibility of the child and his welfare to others, rather than to assume it themselves. Hence the child, handicapped or unhandicapped, goes to school, and, in the majority of instances, starts too young, is crowded too much, and is loaded with subjects that are far beyond a child's capabilities. It has been demonstrated time and again that children who remain out of school until they are ten or twelve years of age, and have received a partial education, through tutoring or from practical events, far outstrip children of younger years in the acquisition of knowledge. They learn quicker, they are keener, and they understand better than the children who have been crowded in their work when immature in years.

Then, too, the school-room does not always furnish a healthful atmosphere; in spite of well-built school-houses and the so-called modern ventilating system, bad air is ever present, and, even though it be present only for a few hours, it has a vitiating effect upon the growth of children, and this is true in spite of the few moments of recess. This applies mostly to boys, although girls have been known to exercise vigorously and valiantly at recess periods out of doors. A good many children, however, loiter about the halls, infest the basement rooms and toilets and loaf rather than play, not only to their discredit, but to their detriment from a sanitary and hygienic point of view. The school, at any period, produces a certain amount of nervous uncertainty and apprehension in the mind of the child; and the nervous strain in meeting examinations, in preparing papers, in submitting to a rigid and false rule of written examinations, is enough to make most children unstable and unhappy. All of this may be removed during a satisfactory and prolonged vacational period. The child becomes rehabilitated, drops his studies, and thrives in out-of-door life; although he leaves school in June dull and indifferent, tired and nervous, he goes back in September with energy, vim and vitality. Consequently, to go to school all the year round is a poor excuse for an education. To the severe tax of growth during the school age, other things are added to make the child worry still more, and among them are the features known as class distinctions, social obligations and other things that are anything but educational. It means that children early are thrown into a modern, but a false, social atmosphere, from which they emerge nervous, immature, and unbalanced.

Then, too, the great rivalry which exists in almost every school is a feature which must not be overlooked, not only rivalry among the children, but rivalry among the teachers, who are eager to force knowledge into the brain of a child who has already reached his limitations.

Of course we all know that a vacation period was to be provided in the all-year-round school problem, but this will not offset the strains that must be endured in order to compensate the child for his time and his work. Then, too, the present system of education with its many studies, tends to crowd the child, and a return to the old time methods of a few studies with ample time between for recess, recreation, and play, is much to be desired. The board of education, or the educator, may suggest that recreation, exercise, gymnasium work, and things of that sort, which are supposed to belong to the modern system, will tend to relieve the tedium of the actual study period; but this has not been proven,—in fact, the whole situation has shown that there are many faults in our system of education; and undoubtedly many children are overcrowded, overworked, and sometimes overexercised.

There is not enough attention paid to the physical and mental welfare of the child. The one idea of the educational system at present is to force as much as possible into a poorly organized, a badly developed, and an improperly trained brain. The result is humiliation, defeat, despair; and it has been found that when many children reach the higher grades, their final examinations

show them to be lame, unstable, and unequal to the tasks set for them. It is often proved that a pupil comes out still an immature child, unbalanced and uneducated, and carrying with him a chain of symptoms which in the future may cause a decided nervous upheaval and totally unfit many a pupil for the advanced work for which he is supposed to have been prepared.

At the time of puberty and at the time of young adolescence we have the greatest number of nervous or mental disorders, instability founded upon constitutional inferiority, and various types of so-called functional nervous or mental troubles; and on account of the needless activities, the needless crowding of the individual, the child fails to develop into a well-balanced, well-organized human being. Some of his animal instincts are brought out, rather more prominently than his spiritual instincts; and this again may be laid to the fault of the present system of education. Then, too, after the child has been persecuted and pushed beyond his normal limitations, the various phases of mental disorder appear, among them the commonly known precocious dementia, which suspends his functions for a few months and from which he may emerge practically well; but the greater likelihood is that he emerges with a mental reduction, which unfits him for his future industrial or professional life.

As a result of this symposium, it seems to me every medical man present, in spite of the arguments advanced by the promoters of the so-called new educational system, will condemn the all-year school plan as harmful and vicious, and not to be tolerated in the public schools of Minneapolis, a city of vast proportions, where we have vast unoccupied areas unlike the crowded tenement regions of many other cities, with streets full of air and sunlight, and a country nearby where study and observation can be carried on with practical results and with benefit to the child.

The child who does come through, in spite of the handicaps and the educational system, is the one who is endowed with better qualities and better tissues, and who has inherently a better nervous and mental organization. Such a child has behind him a parental discipline and companionship which has produced the needful stimulus, and, hence, we look with pride upon one who is able to overcome all their obstacles and who has the proper physical and mental qualifications that help him through. Such children do things, accomplish things, and are equal to emergencies. They have gleaned from their educational atmosphere the true spirit of education; they are the successful men and women, the strong men and women, those who are active in industrial and professional life. This was shown in the recent draft of an enormous number of young men. Although the percentage of rejections was appreciably high, those who entered the training camps and who have fought overseas have shown a strength of tissue, a determination of spirit, and, in many instances, have relieved themselves of their inherent disqualifications; they have had an opportunity and have profited by it. Yet, they too have certain limitations, and, if crowded too far, they succumb to the inevitable.

NOTE.—This paper was written before the Minneapolis Board of Education decided to abandon its all-the-year-round school plan, which action was evidently forced upon the educators by an overwhelming opinion given by men and women who knew and appreciated the difficulties, the dangers, and the objections that have led to the abandonment of the new fad in education.

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THE RETURN OF TUBERCULOUS SOLDIERS AND THEIR CARE

Minnesota is beginning to receive its returned tuberculous soldiers. Two of them arrived at Glen Lake, the Hennepin County Sanatorium, the other week. In each case the superintendent, Dr. E. S. Marriette, was notified of the soldier's impending arrival by a telegram from the War Risk Insurance Bureau in Washington, which is paying all the expenses of treatment.

In sending these men to Glen Lake the Bureau is following out its policy of arranging for the soldier's care in his own community, provided that community has the proper sanatorium facilities. It is felt that the congenial climate, familiar surroundings, and nearness of friends and relatives are big factors in recovery.

With the arrival of these two men and the certainty that they will be followed by many others, the urgent need for further sanatorium facilities in Minnesota becomes apparent. Glen Lake has only one hundred and five beds at present, and even the contemplated addition, providing another one hundred and sixty beds, will do no more than take care of the civilian needs.

DOCTORS AND LEGISLATION

As we contemplate the seemingly decreasing influence of doctors in obtaining proper and in preventing improper legislation for the public, it may be well to seek a cause for this condition, as well as a justification for the seeming indifference of doctors to all such legislation.

Such cause and justification, it seems to us, are found in certain self-evident truths about legislation.

It is apparent to the least observant person that every proper legislative act will help a few individuals unduly and will injure a few unduly, but it will benefit the public at large. On the contrary, every improper legislative act will do the same for a few individuals, but, in addition, it will injure the public at large.

It has become equally self-evident that most legislative bills are passed by the activity of the few, not by the activity of the public, except as such activity is aroused by the few who are personally interested because of the help or injury to them a bill will effect. If the bearing of a bill upon public interests is unmistakable, which is rarely the case, the public may be appealed to by one of the two groups of men for and against it.

The truth of the above statements will perhaps be questioned by no one. But we must go a step further to get light upon the subject we are considering,—that is, doctors and legislation.

If a group of men take special interest in legislation helpful to the public, even the public will turn against such men if it can be shown that the proposed legislation will benefit such men, even indirectly. In fact, this tendency to suspect one who works for the public good will be used by men materially benefited by the defeat of the legislation. In a word, much of the legislation of today is purely personal and selfish.

The above facts have become so apparent to doctors that it is well-nigh impossible to interest them in behalf of legislation that is very helpful, if not absolutely essential, to the public welfare. Bills indispensable to the maintenance of public health have been slaughtered this winter in many state legislatures, while bills clearly inimical to public health have been passed by almost unanimous action. The legislative committee of the Ohio State Medical Association expressed the feeling, perhaps the decision, of most doctors when this committee abandoned all effort to obtain legislation helpful to the public or to prevent legislation hurtful to it. The committee especially threw the responsibility upon the public itself, or, through the public, upon the lay members of the legislature. This action had a good effect upon such laymen. In Minnesota and the Dakotas men and women who want "to practice medicine," or, more strictly speaking, to substitute some fake form of healing for the

practice of medicine, are permitted to do so; and these practitioners are given the right to do what they make no claim to be able to do,—for instance, the right to issue a death certificate, naming therein the cause of death.

It is a grave question, indeed, whether the quickest and surest way to correct such evils is not to remove all restrictions to the practice of medicine. This action would fill any of our Western states with men who carry diplomas from a lot of defunct medical schools, as well as with men whose graduation from the blacksmith shop is effected by a change of dress. The country is full of "John Tills" waiting an invitation to pass through the first door that opens into a rich state, whether made rich by the presence of abundant grain and cattle on the farm, or (to the fakirs) by abundant fools on the farm and in the village and the city. The cost of this mode of effecting reform would be measured in thousands of lives lost, impaired health, and untold misery. We may have to pay it.

MINNESOTA MEDICAL BILLS

Some time ago a bill was introduced into the Minnesota legislature from one of the northern counties, for the purpose of establishing county boards of health. This bill was not fathered by the State Board of Health, but was introduced by some man who wanted to see conditions improved. Very little was said about it, but for some reason or other the various cults of the Twin Cities decided it was time to take a hand in legislative matters, and, consequently, the four principal consciousless objectors, composed of Christian scientists, osteopaths, chiropractors, and some wandering homeopaths, gathered their forces and crowded the galleries of the legislative hall with women. There were very few men in the galleries at the time, and one can readily see what a perfectly wonderful opportunity it was for these people who like to kill off things that they object to. Every time some Christian scientist argued against the bill the women all applauded, and when the vote came, killing the bill, there was great rejoicing among this crowd of vocalist women.

As a matter of fact, the defeat of this bill was perfectly satisfactory to the health authorities of the state, because it was rather cumbersome and too verbose. Later the State Board of Health introduced a substitute bill, which, instead of covering seven pages, was condensed into one page, doubtless giving Mr. Henry Deutsch, of Minneapolis, an opportunity again to display his Christian scientist oratorical powers, which is always accompanied by a broad and generous smile, thereby keeping the legisalture in good humor, and also impressing upon them the fact that Henry Deutsch is a man without guile, and has nothing but the real interests of the community at heart.

The people who objected advanced the argument that, if this bill became a law, it would provide for the medical examination of children in the public schools, and he assumed from that that it would be followed by compulsory treatment, in spite of any ideas which the parents might entertain. Mr. Deutsch made the further assertion, which was quite untrue, that the American Medical Association was behind the bill. Of course, everyone who knew anything about the presentation of this bill knew perfectly well that it originated from the country, and had no possible connection with the American Medical Association or the State Medical Association.

Now, when the other bill comes up, the probabilities are that the same interference will take place, and unless we, as physicians, present a reasonable argument to the legislature, that bill may also be defeated. As a matter of fact, the bill does not aim in any way to eliminate or prevent the parents of children from employing any manner or method of treatment they see fit: it simply provides that the State shall have authority to create county boards of health, each composed of representative men in the county, including one physician. There is nothing wrong about the bill in any way: it is a perfectly rational, normal legislative product, and should be endorsed by every man in the legislature who is not in sympathy with the above-mentioned specializing sects, who are so afraid that they will have no opportunity to follow out their peculiar methods of treatment. Of course, with the passage of the chiropractors' bill, it will be rather difficult to pass much medical legislation. The chiropractors' bill, as amended, prevents them from practicing surgery, but, apparently, leaves them in full feather to practice almost anything else they see fit.

During the recent epidemic of influenza and pneumonia, many Christian scientists suffered from errors of thought, in that they noticed that they had a running nose and a very annoying cough; that their bones ached, and they felt very tired. Of course, they were, probably in their own minds, speedily cured by Christian scientist

practitioners, although some of the Christian scientists did wander from the fold, and did employ physicians, whose advice they followed, but they are clever enough to say nothing about this side of their medical experience. Very naturally, too, the osteopaths and the chiropractors were quite strong and firm in their belief that they could prevent and cure influenza and pneumonia, just as they think they are able to cure an acute appendicitis; and it is perhaps useless to argue this point with any of these people, because they have fixed ideas which have almost reached the delusional stage, and everyone knows that it is not wise, or profitable, to argue with the deluded person.

The state public health is having a hard row this year. Its friends have not been able to stem the tide of opposition, nor to present sufficiently lucid arguments to the legislative bodies that are real convincing. This does not mean to say that all the members of the legislature are opposed to medicine, but it does intend to convey the idea that the majority of them are opposed to remedial and medical public health and legislation. A minority of the body believe in public health, and, although they may be able to kill measures concerning public health, they can do nothing in the reconstruction of public-health laws.

It is time, again, to ask the readers of THE JOURNAL-LANCET to take some interest in legislative bills which affect the public health, unless they are firmly convinced that the proposition is an impossible one. Minnesota is not the only state to suffer from these antibodies, for many other states are going through the same throes of excitement and discomfort. The big State of California so far has kept its head very level, and few of these questionable bills on public-health legislation have been brought to light. Minnesota ought not to be so far behind, but Minnesota has this year no representative of the medical profession in either branch of the legislature. Perhaps the prospective medical candidate is discouraged at the efforts of his confréres, who have labored along and tried to present medical problems in a fair-minded way.

A word, in conclusion, to the Minneapolis medical men. Will they not endeavor to see that the bill so important to Minneapolis, an act creating and establishing a department of public welfare in the government of cities in Minnesota of over fifty thousand inhabitants, is enacted into a state law? Certain changes have been made in the bill, which meet the objections of the local board of health, and of the board of education, but THE JOURNAL-LANCET still adheres to its original opinion that, if this bill is enacted, it may assume control of all the public-health measures in the city. In order, however, to get any bill of this kind through, it may be necessary to make some concessions, even though they are not favored by medical men.

The bill as modified to date is published on another page.

HAPPY CHILDREN HEALTH CRUSADERS

Children from the public and parochial schools of Minneapolis had the time of their young lives the week that the Northwest Automotive Show was held here. Twice a day different groups of eleven paraded through the great Exposition building, dressed as Modern Health Crusaders, in martial garb of khaki, with overseas caps bearing the double-barred crimson cross which is the emblem of the National Tuberculosis Association, and "silver" shields adorned with the same emblem. Each child carried a banner indicating the particular daily "health chore" he or she represented; and some carried, also, monster toothbrushes, nailbrushes, individual drinking-cups, and cakes of soap.

Besides these "boosters" for the National Health Tournament, now being conducted through the schools, the Anti-Tuberculosis Committee of the city had a booth display featuring the handicraft work of the patients at Glen Lake, the Hennepin County Sanatorium. Health stereopticon slides gathered crowds every evening, and so did the impressive map and charts showing the ravages wrought by the white plague as compared with the toll of war.

MINNEAPOLIS CLINIC WEEK

The second yearly session of Minneapolis Clinic Week will be held on May 5 to 9, inclusive. We shall give full details of the new plan for the work in our next issue, that of April 1.

CORRESPONDENCE

A LETTER FROM PARIS

TO THE EDITOR:

On arrival at Paris, I went directly to the Baudelogue Clinique. The hospitality of the staff of this institution to Americans cannot be

surpassed. Dr. Pinard has been the head of the hospital for a long period of years, but the active head now is the very capable and energetic Dr. Couvelaire. He has a wonderful personality, is very pleasing to patients, and convincing to students.

The women in this hospital during pregnancy are under the care of midwives. This seems very strange to anyone with our Western bias, but I can assure you that some of these well-trained women know a great deal more about the scientific care of their patients than some young, and even some old, physicians.

The students have access to the dispensary to learn the principles of abdominal palpation. The professor follows the plan of a daily visit in the wards, selecting a few interesting cases. Each day the students have practical examinations (clinics) for half an hour, then a lecture on, and theoretical discussion of, the same condition for another half hour. The latter part of the morning is used for operations. The number of students present at any one operation is limited.

Dr. Couvelaire works with only one assistant. There is no sterile nurse. The two doctors drape the patient and service table, and lay out their instruments and sterile goods, within easy reach.

For abdominal work a simple retractor is held by a metal frame attached to the patient's legs. This, together with the absence of a nurse, makes it possible for the visitor to see a great deal more of the operative field than is otherwise possible.

The operator is keenly interested in pathology; and after each operation, in the course of which tissue is removed, he examines the specimen carefully with regard to its position and attachments while these are still fresh in his mind. The specimen is then sent to the laboratory.

The anesthetics used were ether, given by various modifications of the closed method, and sometimes chloroform.

During instruction with regard to "placenta previa" great emphasis is placed on the fact that it is in most cases a low insertion of the placenta, a portion of which overlaps the cervix. I consider this viewpoint helpful in properly understanding the condition. As occasionally occurs, one woman proved to be one of the exceptions to this, and was kind enough to pass a real centrally implanted placenta, with membranes intact. A hole had been made in the center of the placenta to bring down a foot, as the baby had been found dead. This specimen was carefully mounted and preserved.

There are several maternities in Paris well worth a visit, two of which I was fortunately able to visit. The Hospital Tarnier is now directed by Dr. Bar, and is a growing institution. The Maternity Hospital is large, but active. It had the misfortune to stop one shell from Jerry's long range gun. In connection with the large anatomy department, there is a collection of pelves, which is alone worth a trip to Europe at Uncle Sam's expense.

Though I do not "parlevous," I was impressed with the studious nature of the French physicians, as well as with their courtesy.

JOHN W. BELL, M.D.

MISCELLANY

THE PROPOSED PUBLIC BILL FOR LARGE MINNESOTA CITIES

AN ACT creating and establishing a department of public welfare in the government of cities of Minnesota of over 50,000 inhabitants, and not governed under a charter adopted pursuant to the provisions of Sec. 36, Art. 4, of the State Constitution and relating to the preservation of public health and the administration of the charities and corrections of such cities, and defining the powers and duties of such department.

BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF MINNESOTA:

Section 1. There is hereby created and established an executive department in the municipal government of each city of this state now or hereafter having over fifty thousand inhabitants and not governed under a charter adopted pursuant to the provisions of Section 36, Article 4, of the state constitution, to be known and designated as the Department of Public Welfare. The powers and duties of such department shall be exercised and performed by an executive board to be known and designated as the Board of Public Welfare. Said board shall consist of the Mayor, ex-officio, President of the City Council, ex-officio, and five members appointed by the Mayor. The appointed members of said Board shall first be appointed for terms of one year, two years, three years, four years and five years, respectively, from July 1st of the year in which the appointments are made. Thereafter the Mayor shall appoint annually one member of such Board for a term of five years beginning July 1st of the year in which such appointment is made. Any vacancy occurring for any cause in the office of any appointive member of the board shall be filled for the unexpired term by appointment by the Mayor of a member to fill such vacancy in the above prescribed manner. Each member of said board shall continue in office until his successor has been duly appointed and has qualified. Before entering upon the discharge of the duties of his office each member of the board shall make and file with the city clerk an oath that he will faithfully discharge the duties of his office. Said board shall organize and enter upon the discharge of its duties on July 1st following its creation and appointment, or on July 2nd, in case July

1st shall fall on Sunday or a legal holiday, at which meeting it shall elect from its members a president of the board who shall hold office for one year and until his successor is elected and has qualified. All members of the board shall serve without compensation as such members.

In cities within the class herein designated, existing at the time of the passage of the act, the first appointments by the Mayor shall be made before the first day of May, 1919. In the case of a city coming into the class after the passage of this act, the first appointments shall be made before May 1st of the year in which such City first comes within the class.

Section 2. The board of public welfare hereby created shall have and exercise general supervision and administrative control of all activities and agencies carried on and maintained by the city for: (1) The promotion and preservation of health, and the prevention and suppression of disease in the city; (2) The care, conduct, management and operation of all hospitals, dispensaries, and clinics maintained by the city and the furnishing by the city of medical and dental service to the poor; (3) The relief of the poor, aged, and indigent, and the maintenance, management, control and operation of all public institutions now or hereafter established by the city for the relief of the poor, aged, and indigent, and (4) The maintenance, care, management, conduct and operation of all penal and correctional institutions established or to be established by the city; (5) Provided nothing in this act shall be construed as limiting the present power of the Board of Education of any city to provide for the promotion of health of the public school children.

Section 3. Said Board of Public Welfare shall have authority to issue orders, adopt rules and regulations for the promotion and preservation of public health and the relief of the poor, aged and indigent in the city, and for the management of the institutions under its care and control, which rules and regulations shall be in accordance and not inconsistent with the laws of the state or the ordinances of the city. The sole power and authority to pass ordinances relating to the promotion and preservation of health and prevention and suppression of diseases in the city shall remain in the City Council of the city as provided by its charter or any law other than this act.

Section 4. Said Board shall hold its annual meeting on the first Tuesday after the first Monday of July in each year after its creation, and at such time shall elect a president from among its members who shall hold office for one year and until his successor is elected and qualified. The Board shall have power and authority to appoint a secretary of the board, a commissioner of health, a city physician, a superintendent of hospitals, a superintendent of relief, a superintendent of corrections, and such other heads of divisions of the public service under its control as the board may from time to time deem necessary. The city physician shall be the physician and surgeon to all departments of the city. Said board shall have power and authority to fix the term, salary and compensation of each of such officers and to prescribe their duties and to discharge and remove any of them from office. The commissioner of health shall not be included in the classified service of the city, under the civil service act and shall not be subject to the provisions of such act.

Section 5. Said board shall have power and authority to determine the number of employees in each division under its control and to fix their salaries. The head of each division shall have power to appoint, subject to confirmation by the Board, all subordinate employees in his division, and prescribe their duties. All employees of the Board other than the commissioner of health shall be included in the classified service of the city under said civil service act and their appointment, employment, suspension and discharge shall be made under and pursuant to the provisions of such act.

Section 6. All officers and employees of the department of health, the board of charities and corrections, and the several boards, bodies, and persons having in charge the institutions, departments and activities of such city, referred to in subdivisions 1 to 4, inclusive, in Section 2 hereof at the time this act becomes effective therein, shall be eligible to similar offices and positions under the Board of Public Welfare hereby created without being required to take civil service examinations as to their qualifications therefor, and they shall continue in their respective offices or positions from the time this act goes into effect, until further action of the Board.

Section 7. Upon the organization of the Board hereby created there shall be transferred to the credit of the Board in the city treasury all unexpended balances of the funds appropriated or set apart during the year in which the Board under this act is first created in any city, for the use of the department of health, the board of charities and corrections, and the several departments, boards, bodies, and persons having in charge the institutions, departments and activities of the city referred to in subdivision 1 to 4, inclusive, in Section 2 hereof, together with all further revenues and funds that may or would accrue to the said departments, boards and institutions if they were continued as separate departments, boards or institutions of the city government.

Section 8. The Board of Public Welfare shall prepare and submit to the City Council at or before the first meeting of the Council in September of each year, the amount of money required for the support, maintenance and operation of said Board and of the several divisions of the public service under its control for the next fiscal year, and the City Council shall, in making its annual estimate and levy for expenses of the city government, estimate and provide such sums as may be necessary for compensation of the officers and employees which the said Board is authorized to appoint and employ, and for the improvement, repair and maintenance of the buildings and grounds under its control, and all other expenses required for the Board and each and every department or division of the public service under its control. The City Council in addition to all other powers by it possessed, is hereby authorized, empowered and required to levy a tax annually by resolution upon the taxable property within the city for such necessary amount. Such taxes shall not at any time be in excess of the maximum rate of taxation fixed for the purposes above mentioned by any board of tax levy or board of tax review. Such taxes when levied shall be extended upon the tax books and the tax lists of the county in which the city is situated, and such taxes shall be collected and payment thereof enforced in like manner as other city and county taxes are collected and payment enforced.

Section 9. All powers and duties possessed and imposed by law at the time a Board of Public Welfare

under this act is first created in any city, upon any department of health, board of charities and corrections or upon any board, body or person intrusted with the management and control of the institutions, departments and activities of such city, referred to in sub-divisions 1 to 4, inclusive, in Section 2 hereof at the time a Board of Public Welfare under this act is first created in any city are hereby transferred to and vested in and imposed upon the Board of Public Welfare of such city, and said Board of Public Welfare so created is hereby authorized and empowered to exercise and perform all the powers and duties heretofore possessed by or imposed by law upon the departments, boards, bodies or persons referred to in sub-divisions 1 to 4, inclusive, in Section 2 hereof and each of them as fully and to the same extent as if the same were herein expressly set forth and stated; but said Board shall not issue any bonds or incur any indebtedness beyond the appropriations made by the City Council for the use of the Board. Said Board shall be entitled to all fees and other receipts from its own department. Upon the organization of any Board of Public Welfare under this act the said department of health, board of charities and corrections and any boards or bodies intrusted with the management and control of the institutions, departments and activities of such city, referred to in sub-divisions 1 to 4, inclusive, in Section 2 hereof, shall cease to exist, and shall no longer exercise the powers or perform the duties heretofore authorized and required of them by law, and the terms of office and employment of all officers and employees of said departments and boards herein abolished, shall terminate and no longer continue, except as herein otherwise expressly provided.

Section 10. It shall be the duty of said Board of Public Welfare to enforce all sanitary laws of the state applicable to the city and all city ordinances relating to sanitary regulations of the city, and cause all nuisances in the city to be abated with reasonable promptness, and for such purposes the board and its officers and employees shall be permitted and are hereby authorized, at all reasonable times, to enter upon or into any premises, house or other building or structure in the city and make all necessary examinations to determine the sanitary conditions thereof, and to cause any and all nuisances existing therc to be forthwith removed and abated, after giving notice to the owner, agent or occupant of such premises, house or other building or structure as herein provided. The notice to abate any such nuisance shall be served personally upon the owner, agent or occupant of the premises, house or other building or structure in or upon which such nuisance exists in all cases where such owner, agent or occupant can be readily ascertained and found in the city. Such notice may be served by mail in all cases where such owner, agent or occupant is not in the city or cannot be found therein, and his postoffice address is known. It may likewise be served by posting and keeping posted for 24 hours, a copy of such notice upon the premises, house, building or other structure in or upon which any such nuisance exists, whenever the owner, or agent thereof is not known or cannot be found, and his postoffice address is unknown. If such nuisance is not abated within a reasonable time after the service or posting of said notice, such reasonable time to be stated in such notice, such nuisance may be abated by or under the direction of said Board and the cost of such abatement may in the first instance be paid from any funds under the control of the Board. The cost of the abatement of any such nuisance paid by the Board and not reimbursed by the owner, occupant or agent, shall be reported by the Board to the City Council, and the City Council shall assess and levy, and cause to be collected, the amount of such cost as a special assessment upon and against the premises and property upon which such nuisance existed, in like manner as other special assessments, payable in one sum, are assessed, levied and collected in the city. Such assessments, when collected, shall be paid over by the County Treasurer to the City Treasurer of such city and placed to the credit of the Board.

Section 11. All goods, wares, merchandise, supplies and materials of every kind, required by the Board of Public Welfare for the support, care, maintenance and administration of the several divisions of the public service under its control shall be obtained, purchased and furnished by and through the purchasing department of the city in like manner as supplies and materials are supplied, furnished and obtained for other departments of the city and the Board shall appropriate and pay into the city treasury its proportionate share of the expense of the maintenance of such purchasing department. The officers and employees of said Board shall be paid their salaries and compensation upon payrolls in like manner as other city employees are paid their salaries and compensation. All bills and claims of every kind against the Department of Public Welfare shall be audited by the city comptroller, and no moneys shall be paid out of the city treasury for the uses or purposes of said department except upon orders signed by the president and secretary of the Board and countersigned by the city comptroller.

Section 12. This Act shall take effect and be in force from and after the 1st day of July, 1919.

A KNIGHTHOOD FOR HEALTH

There is a new knighthood in flower, a new chivalry held out in friendly challenge to the children of America. Its motives are cleanliness and health. To try to keep well is to be knightly; to keep neat and clean in the presence of others is to be chivalrous. The Junior Red Cross sponsors the movement. School children of Minneapolis, like those of other cities, are enrolled. The purpose is praiseworthy; its carrying out should be done wisely.

There are four grades in this chivalric order—pages, squires, knights and knights banneret. To qualify as page a boy or girl goes through a probationary period, being required to show a record of 75 out of 100 in performing designated "chores," which include, among others, taking ten full breaths of fresh air daily, washing the hands carefully before each meal, keeping the finger nails clean, brushing the teeth, taking a full bath at least twice a week, sleeping for ten hours every night with the windows open, and playing a specified time outdoors. There are different insignia for the several ranks.

A knighthood based on trying to keep neat and well is worth striving for. Cleanliness has been called next to godliness. Good health is a most precious boon. The best habit in the world is to cultivate good habits. It pays big because it tends to make one master of himself or mistress of herself. It pays because it carries one so far into the good graces of others.

A word to the adults who sponsor this knighthood: Theirs is a part not to be entered upon lightly or to be performed thoughtlessly. There should be a care against throwing too great temptation upon the boys and girls in making out record cards. Due regard should be had for lack of means in homes to perform comfortably some of the chores imposed. Distinctions tending to bruise sensitive child nature should be guarded against. There is delicate business in this knighthood movement—danger signals to be watched closely. According as these are heeded will the purpose be well served. Strong, healthy, clean boys and girls—clean in body and in mind—are the hope of the nation. Whatever makes truly for that kind of cleanliness is amply worth while so long as it does not trespass on the jurisdiction of the family.—*The Minneapolis Tribune.*

PURCHASABLE ELEMENTS OF HEALTH

Organized society may purchase the extinction of the malarial mosquito. It may buy the eradication of the yellow fever mosquito, the rat of bubonic plague, the tick of spotted fever, the fly of sleeping sickness, or the louse of typhus fever or of trench fever. Organized society may buy clean, pure water, and it may purchase a successful food inspection. But it can not buy habits of personal hygiene that produce human health; that defend the individual from disease and postpone his death. It can not purchase health habits that give the individual resistance to disease, making it harder for him to become sick and easier to recover. It can not purchase the personal consciousness of individual obligation in the health affairs of the community that is essential to an effective defense of the community health.—T. A. Storey, M.D., Ph.D.

JOINT INFLUENZA COMMITTEE

A joint Influenza Committee has just been created to study the epidemic and to make comparable, so far as possible, the influenza data gathered by the Government departments. The members of this committee, as designated by the Surgeon General of the Army, the Surgeon General of the Navy, the Surgeon General of the Public Health Service, and the Director of the Census, are Dr. William H. Davis, chairman, and Mr. C. S. Sloane, representing the Bureau of the Census; Dr. Wade H. Frost and Mr. Edgar Sydenstricker, of the Public Health Service; Colonel D. C. Howard, Colonel F. F. Russell, and Lieutenant Colonel A. G. Love, United States Army; Lieutenant Commander J. R. Phelps and Surgeon Carroll Fox, United States Navy.

THE HEALTH OF THE STATE DEPENDS ON THE HEALTH OF THE INDIVIDUAL

The health of the state depends upon the health of the individual. There are innumerable politico-economic reasons why this must be so. The health of its people should therefore be the concern of the state. However, our social organization has not evolved to the point where the state is prepared to assume this obligation. Although the state pays some heed to the question of health, by superficially examining school children; by giving charitable, though often unscientific, medical assistance to the destitute; by enforcing infrequent and often inadequate protective measures against contagious diseases; by providing politically controlled hospitals for the tuberculous, insane, and defective, and by looking after general sanitation; on the whole the individual is left to look after his own health.

Beyond question the state is not as yet prepared to assume the burden of caring for the public health; therefore the responsibility for the health of the community rests mainly upon the members of the medical profession. Now there is no dodging the fact that the profession is not giving the public the service that it ought to have. Ideally, the practice of medicine ought to be on a rigorous scientific basis; ideally, guesswork ought to be completely replaced by facts gained through the adequate employment of science.—G. Shearman Peterkin, M. D.

NEWS ITEMS

Dr. C. A. Durkee has moved from Dwight, N. D., to Abercrombie, N. D.

Dr. A. W. Swedenborg, of Thief River Falls, will probably move to Spooner.

The Southwestern Hospital of Moorhead graduated a class of six nurses last month.

Dr. A. F. Strickler has received his discharge and returned to his practice at New Ulm.

Dr. H. T. Skovhalt has returned to Williston from army service, bearing a citation for bravery.

Dr. Harry C. Smith, of Missoula, Mont., has been taken to the Pacific Coast on account of poor health.

Dr. Sterling H. Olsen, formerly of Milaca, who is back from army service, has located at Austin.

Dr. H. D. Newkirk, of Minneapolis, is home from Camp Humphrey, and will at once resume practice.

Dr. Sylvester J. Hill, a retired physician of Fargo, N. D., died in that city on March 1 at the age of 72.

Dr. Paul Sorkness, of Fargo, N. D., is seriously ill, and his friends are exceedingly anxious about him.

Dr. Ernest Gillmore, of Minneapolis, has become associated with Drs. Benson & Sandven at Willmar.

Dr. G. E. Page, of Elk River, is president of the County Health Association recently formed in that county.

Dr. Alpha M. Whiton, Government physician at Fort Totten, N. D., died suddenly last month at the age of 62.

Capt. Dr. Harry Zimmerman, of St. Paul, who has just returned from France, has been assigned to Fort Snelling.

Drs. G. A. Sarchet and T. L. Stangbye, of New England, N. D., have returned from war service, and resumed practice.

Lt. Col. E. P. Quain, of Bismarck, N. D., recently returned from France, and is now stationed at Fort Snelling.

It is reported that Dr. A. H. Thornton, of Edgemont, S. D., has plans made for a fifteen-room hospital at that place.

The Wittenberg Hospital Association of North Dakota is planning to put up a $50,000 hospital building at Williston this year.

With two or three exceptions, every county in Minnesota has organized, or is planning to organize a county public health association.

The army hospital at Fort Snelling, near the Twin Cities, has been designated as a special hospital for the treatment of peripheral nerve injuries.

Dr. A. T. Mann, of Minneapolis, who has recently been stationed at Fort Snelling, has been discharged, and is now at his office in Minneapolis.

The Red Cross Chapter of Nicollet County, Minnesota, is planning to erect a soldiers' memorial hospital, and has $17,000 on hand for a beginning.

Sister Gina Aarsrud, superintendent of Fairview Hospital, Minneapolis, has been granted a year's leave of absence to study conditions in Eastern hospitals.

The Webber Hospital at Chisholm has been sold to a mining company of that city. The sale was due to Dr. Webber's removal to Proctor to conduct a railroad hospital.

Major J. Frank Corbett, of Minneapolis, has been made chief of staff of the head surgery department in the Walter Reed General Hospital, Washington, D. C.

Dr. F. I. Putnam has resumed his practice in Sioux Falls, S. D., after several months' war service. The report that Dr. Putnam had moved to Iowa was wholly incorrect.

Dr. Andrew Carr, of Minot, N. D., a recent Rush graduate, who has been in medical service in France, was recently married in Paris to Miss Elizabeth Bennett, of Chicago.

Dr. G. A. Slater, who comes from the Grandview Sanitarium, of Oil City, Pa., has been appointed superintendent of the new Southwestern Sanatorium at Worthington.

The chiropractic bill passed the North Dakota senate by one majority, having already passed the house by a big majority. The greater the intelligence, the smaller the majority.

Because of the unprecedented demand for nurses, St. Luke's Hospital, of Aberdeen, S. D., has started an extra class, and will thus graduate a larger number of nurses than usual.

Dr. John W. Rutledge, of Minneapolis, died on February 23, at the age of 75. Dr. Rutledge was a graduate of the Medical College of Ohio, Class of '75. He began practice in Minnesota in 1880.

The Sioux Falls (S. D.) District Medical Society held its March meeting at Sioux Falls some days ago. Dr. E. Klaveness, of Minneapolis, but formerly of Sioux Falls, addressed the society.

The Modern Health Crusaders, the Junior Red Cross, the Little Citizens' League, the Boys' and Girls' Club are some of the titles under which the young people are doing health work in all parts of the country.

Child-conservation clinics, conducted by Dr. E. J. Huenekens and his assistants, under the auspices of the State Board of Health, are being held in various parts of Minnesota, and will be continued for some time.

A bill in the Minnesota legislature provides that hereafter all prescriptions shall be written in English, not in Latin; but it fails to make provision for teaching English to both English-speaking and foreign-language-speaking doctors.

We hear of at least one church in Minnesota that is actively working to combat the scourge of venereal diseases. The Rev. Dr. Brewer, a Presbyterian clergyman of Duluth, is doing valiant work along this line, and few men are better equipped for such work. He is a talented, courageous, manly man.

The health survey of the Renville (Minn.) County school-children showed that 81 per cent of them needed medical care. A newspaper report of the results of the survey says some of the children were blind in one eye and didn't know it, and some were dead and didn't know it. Possibly they were *deaf* and couldn't hear it.

The first regular staff of St. Mary's Hospital of Duluth is now complete, and is composed of thirty-four physicians and surgeons, with Dr.

W. R. Bagley chief of staff. The hospital standard will be the standard of the American College of Surgeons.

There are now about forty patients in the free trachoma hospital of North Dakota, which was opened in December. This hospital is one of six trachoma hospitals in the county. It is under the supervision of Dr. C. E. Downs, formerly of Baltimore, Md.

Dr. Simon, the health commissioner of St. Paul, says he will move heaven and earth, if necessary, to have a cleaner city—that is, clean streets, clean alleys, clean buildings, and clean faces. It is well to have things (and people?) clean on the face.

Dr. G. A. Carpenter, of Fargo, N. D., whose health was not good for some time before his release from the service, is at home. Dr. Carpenter specialized in rectal surgery, and after his discharge did postgraduate work in the New Orleans Polyclinic.

Dr. F. H. Gambell, of Thief River Falls, has sold his practice to Dr. L. F. Fisher, of Grand Forks, N. D., but will remain in Thief River Falls until July. Dr. Gambell has practiced in Thief River Falls for seventeen years, and was once mayor of the city. He will probably locate in a college city for the purpose of educating his children at home.

Dr. W. G. Smith, of Hettinger, N. D., who retired from practice several years ago for ranching life, has resumed practice at that place. Dr. Smith was once president of the South Dakota State Medical Association, and for several years he was the chairman of the State Railroad Commission. He is again associated with Dr. Schumaker, who is home from army service.

The Department of Pediatrics of the Medical School of the University of Minnesota, under Dr. J. P. Sedgwick, is doing splendid work in the saving of infants. Its work in the city of Minneapolis, in co-operation with local welfare organizations, is to see that no infant dies for the lack of intelligent care on the part of the child's mother. Breast-feeding is particularly urged.

A movement to educate licensed aid nurses has been started in Minneapolis by the City Board of Education and the Woman's Christian Association. The work will be done at the Girls' Vocational High School. The course covers six months, and is open to girls 19 years of age with sufficient education to profit by the course. The tuition is free to residents of Minnesota. The course begins March 31, and a second class will begin in June. Graduates in this course will, without doubt, obtain continuous work at from $14 to $21 a week. Such a course should be started in every large city in America, and even then the demand for nurses will not be met.

PRACTICE FOR SALE

A general practice in a North Dakota town of 600 population, now paying $4,500. One competitor, and territory is 25x42 miles in extent, and demands two men. Norwegian-speaking doctor can increase business by 50 per cent. Reason for selling, going to city. Price, $500 for quick sale, including office contents. Address 222, care of this office.

PHYSICIAN WANTED

Wanted, a physician from an A + school, one that can do some surgery, to locate in an A1 town in North Dakota. One who has been in the Government service preferred, but want to hear from all. One physician in the town; also a small hospital, and nurse in attendance. Have a very large territory to cover. Address 213, care of this office.

POSITION IN PHYSICIAN'S OFFICE WANTED

Can do routine laboratory work, electrical therapy, and dressings, and am familiar with the use and administration of all vaccines; expert intravenous operator; can make myself valuable to any physician who uses intravenous treatment; have had several years' experience in physicians' offices. Best of references. Address 219, care of this office.

INSTRUMENTS FOR SALE

I will sell cheaply the instruments and books of my late husband. Among them are new sterilizers, atomizers, an almost new battery, blood-testing apparatus, and surgical instruments, and some almost new books. They can be seen at 1302 Linden avenue any evening or by appointment during the day, or a list of them will be sent upon application. Address Mrs. William Wakefield, 1302 Linden Ave., Minneapolis. Tel. Nic. 5449.

A FINE PRACTICE FOR SALE

Ill health compels me to retire. I offer my practice for sale at a very low price to a good man. I have a hospital of 13 beds in a handsome residence built by a man of wealth. Will rent hospital at low price. Can be used for hospital and residence purposes. Practice in a Minnesota college town of 4,000 population. Practice is paying nearly $8,000, and can be largely increased. Address 221, care of this office.

INSTRUMENTS FOR SALE

Owing to the death of my husband I have for sale a complete line of surgical and electrical instruments, as follows: an electrical sterilizer (almost new); a gas sterilizer; a fine Dr. Roger's blood-pressure apparatus; a Betz instrument cabinet, stand, and table; and a Campbell electrical cabinet, with attachments. All of these articles are in first-class condition, and will be sold cheaply. Address Mrs. W. E. Robinson, 510 Columbus St., Rapid City, S. D.

POSITION AS ASSISTANT WANTED

A recent graduate who plans to do missionary medical work in China, wants a position for a year or more that will give him the largest experience in that time. Is 27; has the B. A. degree from the University of Minnesota, and the M. D. degree from Columbia; has had one year's interneship in a rotary service (largely surgical) in the Brooklyn (N. Y.) Hospital. Institutional work preferred. Can begin work early in April. Address 212, care of this office.

PRACTICE FOR SALE

Will sell my practice in a prosperous village of southern Minnesota very cheaply. It pays over $500 a month, and collections are excellent. Price of practice and office furniture (surgical chair, desk, book-case, chairs, rug, high-frequency and *x*-ray outfit, some drugs, etc.) $500, part cash ($150) and balance on secured paper. Will give possession at once. Modern house can be rented if taken soon. It would be an advantage if doctor speaks German. Address 218, care of this office.

NEW ORLEANS POLYCLINIC

The Graduate School of Medicine of the Tulane University of Louisiana, thirty-second annual session, opened Sept. 23, 1918, and closes June 7, 1919. Physicians will find the Polyclinic an excellent means for posting themselves upon modern progress in all branches of medicine and surgery, including laboratory and cadaveric work. Special attention given to military matters. For further information address Charles Chassaignac, M. D., Dean, postoffice drawer 770, New Orleans. Tulane also offers highest class education leading to degrees in medicine, pharmacy, dentistry, hygiene and tropical medicine.

PUBLISHER'S DEPARTMENT

PLUTO WATER

Pluto Water has the distinction of being used in more hospitals than any other cathartic; and, as it is put into hospitals by "physicians of quality," no other testimonial can speak so highly of it unless it be a trial—a sample bottle, for instance, prescribed by a physician for himself.

FELLOWS' SYR. HYPOPHOSPHITES COMP.

Regularly for about 40 years the announcement of Fellows' Syrup Hypophosphites Comp. has appeared on the third cover page of THE JOURNAL-LANCET; and its popularity has not been affected by all of the new preparations of like nature that have come and gone in a generation and over. You can't fool all physicians all the time; and none have been fooled by this preparation; and this tells the whole story of the success of this preparation.

BENETOL

Benetol, like lysol, is a coal-tar product, but of much higher germicidal power. It is used, in the main, as a disinfectant, and is especially useful in the hospital for disinfecting work of all kinds.

In a highly diluted form it is used to prevent bedsores, and is excellent when used as a mouth-wash.

It is admirable for disinfecting the stools in any infectious case, and for general household sanitation. It is non-poisonous, and it is cheap, thus making its very free use inexpensive.

LISTERINE IN THE RESPIRATORY DISEASES

The respiratory diseases are treated almost exclusively by medicaments that require a vehicle fitting such medicaments for direct application to the mucous membranes. An ideal vehicle for such purposes is Listerine, and it is so recognized by the general profession; and, as a matter of fact, it is used more extensively than all other vehicles, which, surely, proves its value.

Its manufacturers, the Lambert Pharmacal Company of St. Louis, Mo., issue a special pamphlet on this subject, and send it, upon application, to physicians.

THE CREWE SANITARIUMS

Dr. J. E. Crewe is conducting at Rochester, Minn., two sanitariums that are worthy the patronage of physicians, and worthy of it in a very high degree. In one an intensive treatment for tuberculosis is given, and each patient gets an unusual amount of personal attention, which alone gives excellent results.

In his sanitarium for chronic diseases due to faulty metabolism, the milk diet has produced very remarkable results. Here also the patient gets the individual care and attention that insure good results.

Dr. Crewe is an entirely reliable physician with expert knowledge and large experience in the lines of treatment above described.

SUPPOSITORIES

The use of Suppositories is practically as old as medicine itself. While perhaps it should not be claimed that Suppositories are curative in any but the most simple cases, the fact remains that their use as a palliative is always justified and frequently imperative.

Micajah's Suppositories have been in constant use by the medical profession for many years and have given universal satisfaction. Micajah's Suppositories contain no irritant or toxic substances, but, on the contrary, exert an extremely soothing and healing action upon irritation, congestion or bleeding surfaces. They are astringent, antiseptic, and entirely free from any narcotic.

Samples and literature regarding this product will be sent promptly on request to Micajah & Co., Warren, Pa.

THE MINNEAPOLIS SANITARIUM

The Minneapolis Sanitarium belongs to a small class of institutions that commend themselves to ethical medical men. It occupies an attractive residence, once the home of well-to-do people, bought at a comparatively small price and remodelled for its present work. It is conducted by a layman, whose success depends upon the endowment of high-grade medical men manifested in patronage.

Such an institution is the Minneapolis Sanitarium, conducted by Mr. J. J. Baker, a successful manager who has long maintained the confidence of the Miinneapolis medical profession.

It takes care of acute or chronic medical patients, including mental and nervous cases; and it has a special department for selected cases of drug addiction.

The institution is located at 1500 Elliott Avenue, and can be reached by long distance phone Main 2089.

THE FIRELESS COOKER

The "fireless cooker," or as some call it, the "fireless stove," as now manufactured, is a greatly improved cooker over that of a dozen years ago. It no longer contains wood, with open joints, but is made wholly of metal with the best non-conducting lining; and it has a valve for the escape of the vapors created within. Each compartment contains two soap-stones which become actual roasters.

The Duplex Fireless Stove, made by the Durham Mfg. Co., of Muncie, Ind., and sold in most large cities, is, we believe, the best of all these cookers.

The No. 55 stove sells for $23.50, and is the usual household size. No present at like cost for a housekeeper, old or young, could surpass this daily household necessity.

It is well-nigh a misfortune that so few people know the value of this appliance, which soon pays for itself in saving.

THE MEYER UNIVERSAL KLINOSCOPE

The Meyer Universal Klinoscope is an instrument with marked advantages over the two instruments which it so combines as to make it much preferable to the two. It is easily handled, occupies but little space, especially when not in use, and makes the change of the patient from the horizontal to the vertical position so easy that the office girl can operate it with the heaviest patient upon it.

It gives perfect protection to the operator and patient alike, and has other decided advantages.

It is made by the Wm. Meyer Company, of Chicago, now represented in the Northwest by Mr. Carl Young and Mr. W. W. Smith, with display and service rooms at 827½ Nicollet Ave., Minneapolis. Mr. Smith, the new representative of this company, is well known in the Northwest, for he has been a distributor of good things among physicians and surgeons for

many years. The new headquarters will enable the representatives to show their apparatus to their outside friends whenever in the city.

ALKALOL

It is a mistake to regard Alkalol as a physiological salt solution, because it is nothing of the sort. Neither is Alkalol an alkaline solution, that is hypertonic in nature, the action of which, if continued, is to overstimulate gland cells and produce a hyper-secretion of mucous membrane secretion.

Alkalol is, first of all, a hypotonic solution, that is to say, its specific gravity is less than that of the blood. Alkalol possesses the proper degree of alkalinity as well as of salinity. It contains physiological salts which are needed by the cells in the elaboration of their normal secretion. Being hypotonic, it reverses the osmotic current, as a result of which the passage of its salts into the cells, is assured. Consequently, it not only allays irritation and overcomes inflammation, but it feeds the cells, helps to overcome congestion, restores vascular tone, re-establishes normal secretion, which has been declared to be the best possible antiseptic that can be used for any mucous membrane.

Therefore, Alkalol is valuable in many ways and in a multitude of conditions, in the treatment of inflammation of mucous membrane of any part of the body, as a local application to wounds, cuts, burns, dermatitis, etc.

Interesting literature giving the How and Why of Alkalol action and samples of this product will be sent to any physician on request to the Alkalol Company, Taunton, Mass.

THE ST. JAMES HOSPITAL AND SANITARIUM

A new announcement concerning the work of the above-named institution appears on another page of THE JOURNAL-LANCET, and special attention is called to it.

St. James is one of the most attractive small cities of Minnesota, and the St. James Hospital and Sanitarium occupies a building that is commodious, attractive in its appointments, and admirably adapted to sanitarium purposes. Built as a hotel, which was the pride of the city, it is now put to an even better purpose, and it has served the community well.

Nervous diseases and the so-called rheumatic conditions are the specialties of the resident physician, and the milk diet is given in suitable cases.

It can afford to give unusual attention and excellent quarters to its patients because of a low overhead expense.

Dr. Graham U. Risor, is the resident physician; and he will be glad to furnish physicians any information desired concerning the institution.

ANASARCIN

There was a time when physicians had to use crude opium, instead of the alkaloid morphine, powdered cinchona bark, instead of quinine and extract or tincture of digitalis, instead of the active principle of the drug. It goes without saying that certain active principles contained in drugs have certain irritant or unpleasant properties, while others do not This is particularly true of squill. Of the four active principles of squill, scillipicrin irritates the kidneys and scillin produces numbness and vomiting. The other two active principles, scillitoxin and scillipicridin, powerfully stimulate the heart and the kidneys without any possibility of irritation. The combination of these two beneficent active principles with oxydendron and sambucus make an elegant and efficient preparation for use in ascites, the dropsy of chronic cardiac diseases or chronic Bright's, post-scarlatina dropsy, as well as in cardiac neurosis and exophthalmic goiter.

Such a combination is supplied to the medical profession only, under the name of Anasarcin Tablets. Interesting literature regarding these and samples of the product may be obtained by any physician by writing to the Anasarcin Chemical Co., Winchester, Tenn.

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CARCINOMA OF THE SMALL INTESTINE*

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According to the necropsy reports from a number of clinics in which the examinations have included many thousands of cases, carcinoma of the small intestine comprises about 3 per cent of all the carcinomas of the entire intestinal tract. It is generally noted that carcinoma occurs in the duodenum more often than in the other parts of the small intestines; however, our own records, made up almost altogether from those of patients coming for treatment, show that carcinoma has occurred 24 times in the small intestine as compared with 1,822 times in the large bowel and rectum and 1,689 times in the stomach. This very great difference is certainly striking, and indicates, for some unknown reason, an almost complete minority of carcinoma in this region.

In our series of cases carcinoma occurred 5 times in the duodenum, 11 times in the jejunum and 6 times in the ileum; and in two cases the lesions were multiple and occurred in different parts of the small bowel. In a few instances the neoplasm was close to the juncture of the duodenum and jejunum and it was difficult to establish its exact point of origin; it may have been primary in the third portion of the duodenum or in the first part of the jejunum. It should also be stated that carcinoma in the small intestine varied from the typical carcinoma found elsewhere in the gastro-intestinal tract in that in a number of cases carcinomas developed on polypi or papillomas. In a few instances only did we observe the true colloid carcinoma, similar to the ordinary intestinal carcinoma occurring in the part of the intestine between the pylorus and the cecum.

*Presented before the Western Surgical Association, December 21, 1918, Chicago.

CARCINOMA OF THE DUODENUM

A review of the reported cases shows primary carcinoma of the duodenum to be more commonly encountered than carcinoma of the jejunum or the ileum. In our own series of cases, however, this incidence is not borne out, as we have seen but 5 cases of carcinoma of the duodenum as compared with 11 of the jejunum and 6 of the ileum. It should be stated, with reference to these cases of carcinoma of the small intestine, that, in some instances, the growth was quite extensive, and it was impossible to be certain of its origin, though in each instance the person making the examination felt sure that the tumor was primarily a tumor of the small intestine. It is not always possible to differentiate a primary carcinoma of the duodenal mucosa and one originating in the bile-ducts, ampulla, or the head of the pancreas, especially after the growth has become extensive. These tumors occur strictly in one of three parts of the duodenum: the supra-ampullary, the ampullary, and the infra-ampullary. About 70 per cent of all carcinomas of the duodenum are located at the ampulla, though probably the most interesting cases for consideration are those in which the lesion is in the first part of the duo-

denum above the ampulla. It is this portion which is so commonly the seat of an ulcer, and it is of considerable interest to compare the tendency of these ulcers to undergo malignant change with the tendency of the gastric ulcer to change in the same way. So far as I know, no one has ever witnessed the change of a benign gastric ulcer into a malignant ulcer, although, from the clinical, surgical, and pathologic evidence that we have at hand, we are convinced that such a change takes place, at least occasionally. It seems probable that most gastric cancers begin as cancers, but, in some instances, in which an inoperable carcinoma is encountered

Fig. 1 (86605). Obstruction of the upper jejunum, showing gas and barium in the jejunum at the point of obstruction; six-hour retention in the stomach and duodenum.

in a patient who has had an increasing stomach trouble for twenty years or more, it is reasonable to assume that the cancer has not been present all of that time.

In the consideration of the surgical treatment of gastric ulcers, excision should be the accepted treatment, not only for the purpose of obtaining complete relief of symptoms, but also because the ulcers may be malignant at the time, or may later become malignant. We need not have the same fear of malignancy in cases of ulcer of the duodenum. So far as I am able to interpret the case-reports, no clearly defined instances of primary carcinoma of the duodenum which might be mistaken for ulcers, have been reported, and there is very little definite evidence to show that carcinoma of the duodenum ever arises from an ulcer. I was unable to find, in the records of the Clinic, any evidence that a primary carcinoma of the duodenum arose from an ulcer. This point has been considered very carefully and in great detail by others, especially by Jefferson, who collected 30 cases from the literature in which it is possible that this malignant change took place in a duodenal ulcer. However, Jefferson states that he is not at all certain that such changes did take place. He reports a case in which he performed a necropsy two and one-half years after a gastro-enterostomy for duodenal ulcer, in which there was no evidence of the original ulcer, but there was a duodenal carcinoma of the constricting type just where the ulcer was reported to have been. This case seems very important as a support to the contention that duodenal ulcer may be the base of a duodenal cancer. Bland

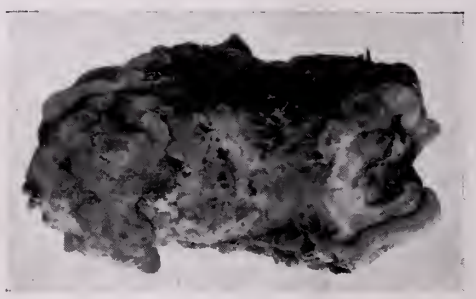

Fig. 2 (86605). Gross specimen.

Sutton reports an interesting case in which a duodenal ulcer was the base of a spindle-cell sarcoma. This was the only case of a primary malignancy of the duodenum that he had seen. At the present time the evidence to show that duodenal ulcer ever becomes malignant does not seem sufficient to warrant a consideration of its excision to prevent recurrence. It is possible that such ulcers will be excised oftener in the future, but the question of malignancy need not be taken into account.

In reviewing our records I found five cases which might be considered as primary carcinomas of the duodenum. In one of these cases a gastro-enterostomy was done for an inoperable obstruction. This relieved the patient for a time. At necropsy, several months later, the pathologists reported carcinoma of the duodenum extending up to the pylorus. In the second case there was a carcinoma of the pyloric end of the stomach; and beginning just below the pylorus, independent of the pyloric tumor, was a malignant papilloma of considerable size. In the third case the original tumor was, presumably, of the first portion of the duodenum, though the ampulla was

obliterated; and from the extent of the trouble it was difficult to determine at just what point it originated. The fourth case was quite similar to the third, and showed extensive malignancy. In the fifth case there was a large carcinoma originating in the first portion of the duodenum. In addition to these cases, there was one other in which operation was done for obstruction in the jejunum, caused by intussusception produced by a malignant polyp. The necropsy, some time later, revealed a papillary carcinoma of the first part of the duodenum, which apparently had not produced symptoms. The histories of these five duodenal cases indicate that the papillary tumor, which so readily becomes malignant, is one of the most common types of primary carcinoma of the first part of the duodenum. It is this type which seems, at times, to extend across the pylorus from the duodenum to the gastric mucosa.

Fig. 3 (85886). Obstruction of the upper small bowel. The markings of the valvulae conniventes are clearly visible in the gas and fluid-distended bowel.

Fig. 4 (189091). Obstruction of the small bowel, showing gas and fluid-distention of the bowel.

CARCINOMA IN THE REGION OF THE AMPULLA

The exact point of origin of a carcinoma in the region of the ampulla is frequently difficult to determine. It may originate in the duodenal mucosa, in the mucosa of the ampulla or ducts, or in the head of the pancreas. A primary carcinoma in this region, if it obstructs the biliary and pancreatic ducts, as it usually does, presents the same clinical picture, no matter where the growth originates, namely, painless jaundice and great emaciation. The jaundice gradually increases, and in a short time becomes very deep. The emaciation depends on the extent of pancreatic interference, which is apt to be complete; and the loss of weight and strength is very marked. A carcinoma in the mucous membrane of the ampulla is the most frequent type, and also probably is the most amenable to treatment. It is very probable that these cases, as a group, have not received the consideration in the way of treatment that is warranted. It is apparent that, if the liver and the pancreas have been completely blocked for any length of time, radical surgery cannot be considered, although, I believe, in some instances the cases may be obtained early enough so that a removal of small carcinomas in the region of the ampulla will be possible. Plastic surgery in this region has been very satisfactory in the traumatic and stone cases, and, undoubtedly, is of advantage in malignant lesions that are slow in developing and in forming metastases.

CARCINOMA IN THE INFRA-AMPULLARY PART OF THE DUODENUM

In the infra-ampullary part of the duodenum, a carcinoma occasionally occurs as a primary constricting lesion. Such cases are often diagnosed as cases of pyloric obstruction, though the clinical

features are different in that the patient with duodenal cancer and obstruction usually vomits a large amount of material containing bile and pancreatic secretion. The tumors are usually small, and produce a marked degree of obstruction. If they are not attached posteriorly to the vena cava and other structures they may sometimes be removed satisfactorily. This condition of carcinoma of the third part of the duodenum is suggested when marked dilatation of the duodenum is encountered. The *x*-ray will often locate the obstruction in these cases. In certain instances it might be quite difficult to state whether the tumor is located in the terminal duodenum or at the beginning of the jejunum.

Fig. 5 (127339). Small-bowel distention due to low obstruction.

CARCINOMA OF THE JEJUNUM

Carcinoma occurs in the jejunum either as a degenerated polyp or as a ring carcinoma, quite similar to the ring carcinoma frequently seen in the large intestine. In the degenerated polyp type there is usually no evidence of the condition until the tumor has been forced down into the lumen of the bowel so as to produce intussusception and obstruction. These tumors rarely become so large as to interfere with the lumen of the intestine. They may, however, be multiple, as they were in several of our cases. Polypi of the small intestine are not altogether uncommon, and it is well to realize that they may undergo malignant changes. In the ring carcinoma type the onset of the obstruction is gradual; and often the lesion is located with difficulty. The *x*-ray is helpful in these cases. The tumor is small, and is not palpable early in the trouble, although peristaltic waves may be in evidence. On exploration the proximal loop of the intestine will be found greatly dilated, and the wall hypertrophied from the gradually increased exertion. At first appearance the dilated small intestine resembles the large bowel. Ordinarily, these tumors do not metastasize early; a liver nodule, however, was noted in one of our cases when the intestinal growth was very small. Often the omentum is sealed to the growth. In one instance, because of this omental attachment, I considered a radical excision inadvisable, and made an entero-anastomosis, joining the distended and

Fig. 6 (250604). Gas-and-fluid distended small bowel due to low obstruction.

collapsed bowel. The fact that this patient lived comfortably for eighteen months, indicates, I believe, that it was a mistake not to have excised the growth with the attached part of the omentum. Mikulicz reported one case of a patient living ten years after an anastomosis without excision, which would suggest the condition to have been a benign lesion or a very slowly developing malignancy. Radical excision is certainly indicated unless the disease is extensive or presents distant metastasis. Regional lymphatic enlargement does not contra-indicate radical excision. We have had eleven cases of carcinoma of the jejunum; in most of these a positive diagnosis could not be made before exploration, and in a considerable number the growth was too extensive to permit radical operation.

CARCINOMA OF THE ILEUM

Carcinoma of the ileum, like carcinoma of the jejunum, occurs in the annular contracting, or ring, type; also as a sprouting polyp or carcinoma, in which case the growth is a broken down papilloma. Occasionally the massive developing type of carcinoma is encountered; in the jejunum and ileum the growth is so large and involves so much of the intestine that it frequently is mistaken for tuberculosis. The lumen is not greatly interfered with by the growth, so that it may be very large and extensive before it is recognized; only one such case is recorded in our series. Comparatively few carcinomas have occurred at the ileocecal valve. In nearly all of our cases the lesion originated several inches from the valve, and was not associated with it in any way. A number of cases have been reported in the literature in which the growth seemed to arise directly in the mucosa at the juncture of the ileum with the cecum. Other instances have been cited in which a carcinoma, arising from the ileum or the cecum, had extended across the mucosa of the ileocecal valve. We have seen very few carcinomas at the valve as compared with the number arising at the juncture of the cecum with the ascending colon or of the ileum proper. From the mechanical arrangement of this region of the intestine and the likelihood of repeated traumatization, it would seem that carcinoma would not be uncommon in this area.

Cases of multiple tumors in the small intestine have often been reported. In several of our cases the growths were multiple. These may occur as papillary tumors or ring-constricting tumors. In one of our cases there was a tumor in the stomach and one in the small intestine; and in at least two cases there was a tumor in the small intestine and one also in the large bowel. Gruner and Fraser have reported two cases of symptomless tumors occurring in the ileum. The growths arose in the submucosa, and were, histologically, similar to tumors of the appendix as observed by MacCarty. While such neoplasms are histologically malignant, so far as we have observed they never develop to the point of producing symptoms, and have never been known to metastasize. True carcinoma of the appendix is rare in our experience, though this type of hyperplasia occurs in about 1 in every 250 appendixes examined.

The clinical features in a true carcinoma of the ileum are similar to those of the jejunum. Usually the diagnosis is intestinal obstruction, the location of which must be determined at the time of the operation. In some instances the *x*-ray will make the location more definite. When a papillary carcinoma is encountered it should be remembered that there may be multiple lesions. As regards treatment, the same observation holds in carcinoma of the ileum and carcinoma of the jejunum; that is, excision should be done if there is no distant metastasis, and if the local attachments are not too extensive. In case of a very marked obstruction with a great deal of intestinal distention and associated fecal vomiting, it will be well to do the operation in two stages, first relieving the obstruction by an enterostomy, and then making a resection. I believe this method of procedure should be followed in every case in which the obstruction is marked. The mortality-rate from operating in cases of acute obstruction is so high that any procedure which will reduce it should be employed. In our series there were six cases of carcinoma of the ileum; four were adenocarcinoma, or the ring type of growth, and one was a degenerating polyp with the resulting intussusception. In one case, inoperable because of the extent of the disease, there was a definite carcinoma in the ileum, high up, and one in the cecum also.

In the present review are 24 cases, which I have been able to collect from the records of the Clinic. The records show also that during the same period there were 1,689 cases of carcinoma of the stomach and 1,822 cases of carcinoma of the large intestine. As compared with 24 cases of carcinoma of the small intestine, this would seem to be a smaller percentage than has been reported in other statistics. This may be due to the fact that in our cases the records are of patients coming for treatment, while in the reported cases, in most instances, the series are of those coming to necropsy.

ABSTRACTS OF REPORTS OF CASES

FIVE CASES OF CARCINOMA OF THE DUODENUM. AVERAGE AGE OF PATIENTS, 53 YEARS

CASE 1 (24217).—A man, aged 57, had had at times a constant, dull, aching epigastric pain through to the back. The patient had not vomited, but had eructed sour gas and sour water constantly, and occasionally sour food. His appetite had been good, but he had become progressively weak since the symptoms began. There were no severe cramps or colics and no weight loss. The test-meal findings were as follows: Total acidity, 94; free hydrochloric acid, 0, and combined, 94; lactic acid, +; blood, +; food remnants, + + + +. There was a nodular tumor, movable on inspiration, in the right epigastrium. The abdominal veins were

engorged. The clinical diagnosis was carcinoma of the pylorus.

June 12, 1909, an anterior gastro-enterostomy was done, and a carcinoma of the duodenum, extending up to the pylorus, with obstruction, was found. The patient died September 12, 1909, three months after the operation.

Case 2 (61097).—A man, aged 39, had had a severe attack of inflammation of the bowels twenty-two years before. For twenty years the patient had had spells of "nervous indigestion," lasting for a week or more. He had had a sensation of weight below the umbilicus immediately after meals, and occasionally sour stomach and some gas. The bowels had always been loose until within the past year, when they were very constipated and symptoms had become more distressing. Gas and vomiting of a sour, digested mass occurred at first every three to four days, and later was forced every night in order to permit sleep. Gas pain came immediately after meals, and other pain came on two hours after meals. The distress was mostly in the lower abdomen, although there was some in the left iliac fossa. There was some distention. There was a loss in weight of forty pounds in six months. The test-meal findings were as follows: Total acidity, 24; free hydrochloric acid, 0; and combined, 24; lactic acid +; blood +; food remnants +. A mass was palpated in the epigastrium. The clinical diagnosis was pyloric obstruction.

Nov. 22, 1911, a Billroth No. 2 and a posterior gastro-enterostomy were done. The duodenum was removed down nearly to the common duct, and a piece of the pancreas was removed for secondary carcinoma. Extensive carcinoma of the pyloric end of the stomach and primary carcinoma of the duodenum were found. Beginning just below the pylorus, and very adherent to the head of the pancreas, was a malignant papilloma which distended the upper end of the duodenum to the size of an orange. The pathologic findings were: Adenocarcinoma of the stomach and a carcinomatous papilloma springing from the duodenal side of the pyloric ring.

Case 3 (163558). A man, aged 52, six months before began to have cramps in the lower bowels which lasted two hours. A few days previous to examination he had had diorrhea, followed by cramps for three or four days, as many as eight stools a day, slimy, with a sour odor. He had pain in the pit of the stomach one hour after meals, of short duration at first, but which later was constant. He had a ravenous appetite, but had lost 20 pounds in weight since the onset of the trouble. The jaundice, which came on a week before, was getting worse and he was emaciated. No test-meal was given. The *x*-ray showed a redundant transverse colon and sigmoid. Physical examination showed a mass to the right of the umbilicus. The clinical diagnosis was made of obstruction of the common duct, carcinoma(?), or pancreatic carcinoma(?).

July 1, 1916, a cholecystogastrostomy and an exploratory choledochotomy were done, and a hard, firm mass at the head of the pancreas, which produced obstruction of the common duct, was revealed. The common duct was opened and the finger introduced in order to make sure that there were no stones. The tumor was found to be the cause of the obstruction. July 6, 1916, a transfusion was done for secondary hemorrhage. Death occurred July 8, 1916. Necropsy revealed a carcinoma of the first portion of the duodenum and head of the pancreas, with obliteration of the ampulla of Vater.

Case 4 (143715).—A man, aged 59, first came for examination, October 19, 1915, complaining of the sudden onset of numbness of the fingers and lower extremities, which had been gradually increasing during the previous ten months. For a year he had had spells of distress in the stomach, the spells coming on two hours after meals and at midnight, and lasting from a week to ten days. Bicarbonate of soda and vomiting afforded relief. He vomited sour material at irregular intervals, often at night; and at times the entire previous meal was vomited up. His appetite was good. The hemoglobin was 40 per cent. The test-meal findings were as follows: Total acidity, 10; free hydrochloric acid, 0; combined, 10. The *x*-ray findings of the stomach were indeterminate. Secondary anemia and pyorrhea, 2+, were discovered, and treatment was recommended to clean up the mouth from infection. A bland diet was advised. After three and a half months' treatment at the Clinic, followed by treatment at home, the patient returned with all the symptoms aggravated. His appetite had been good as a rule, but he had lost in weight rapidly during the last two months. He had an icterus of seven weeks' standing. The hemoglobin was 22 per cent. A clinical diagnosis of hypertrophic cirrhosis of the liver, ethylism and secondary anemia was made.

July 7, 1916, transfusion for secondary anemia was done. Death occurred July 11, 1916. Necropsy revealed carcinoma of the first portion of the duodenum, common-duct obstruction, general icterus, and a huge right pulmonary embolism.

Case 5 (207423).—A man, aged 58, came for examination, giving an eight-months history of daily dull, gnawing epigastric pain without radiation, two to four hours after meals. He had sour and bitter eructations, and vomited from three to nine times a day, often large amounts, with blood and "coffee grounds." The vomiting afforded much relief. The course of the disease was progressive, associated with a marked loss of weight, strength, ambition, endurance, and appetite. He was constipated, but had no severe pain, jaundice, or fever. The test-meal findings were as follows: Total acidity, 30; free hydrochloric acid, 0; and combined, 30. There was a trace of blood, and food remnants, 2. A tender fullness in the right epigastrium was noted, but no mass was palpated. The *x*-ray showed a duodenal ulcer. The clinical diagnosis was pyloric obstruction and carcinoma of the stomach (?) and pancreas (?).

September 15, 1917, a posterior gastro-enterostomy was done, and a pyloric lesion was found, apparently on the duodenal side, which caused obstruction (4). A large mass which felt inflammatory was fixed to the liver and the pancreas. Death occurred September 16, 1917, and necropsy revealed carcinoma of the first portion of the duodenum (embolism?).

SUMMARY OF CASES OF CARCINOMA OF THE DUODENUM.

In Case 1 of this group the eructation of food for some months suggested ulcer primarily, although there was no other evidence of ulcer. A tumor mass was palpable, and was thought to be in the pylorus until

the exploratory incision revealed a duodenal carcinoma. The history of the case furnished no indication that an ulcer was present prior to the carcinomatous growth.

In Case 2 the clinical history is not of much importance so far as the duodenal growth is concerned, since the patient also had a carcinoma of the stomach in addition to the papillary carcinoma of the duodenum. However, a history was given of twenty years of stomach trouble, which suggests the existence of a high gastric ulcer prior to the carcinoma.

In Case 3 the lesion occurred in the region of the ampulla and was so extensive that no estimate could be made of its exact origin.

Case 4 was reported as carcinoma of the duodenum. There is nothing in the history to suggest that it had formed on an ulcer.

Case 5 was first diagnosed as duodenal ulcer. The man was 58 years of age, and gave a history of having had trouble for eight months. At operation it was impossible to discover where the tumor originated, though it obstructed the duodenum. The tumor in no manner resembled a duodenal ulcer. The necropsy revealed an inoperable carcinoma, apparently primary in the first portion of the duodenum.

ELEVEN CASES OF CARCINOMA OF THE JEJUNUM. AVERAGE AGE OF PATIENTS, 46 YEARS.

Case 6 (710).—A man, aged 39, for three months before coming for examination had been troubled by gas, rumbling, and sour eructations, and cramping pains in the abdomen starting on the left side below the umbilicus, and going to the right. The patient had taken liquid diet from the beginning, but for the past month everything that was eaten was vomited as sour, undigested food. The bowels were in fair condition; the weight loss was fifty pounds. No abdominal tenderness was detected on examination. A diagnosis of chronic intestinal obstruction was made.

October 12, 1907, a resection of twelve inches of the small intestine and a lateral anastomosis were done. A carcinoma of the jejunum five feet from the origin, with great obstruction, was found. Pathologic examination showed carcinoma of the small intestine. The patient died at his home some time within a year after the operation.

Case 7 (20434).—A man, aged 40, had had attacks of colicky pain in the lower abdomen, induced by sour food, for twenty years before coming for examination. Three months before he had had an attack of dull, aching pain in the pit of the stomach, regularly one-half to an hour after meals, followed by occasional heartburn, and vomiting of bitter food, with relief. Recently there had been retention emesis. The appetite was fair; the bowels were very constipated save for one attack of diarrhea five months before. During the past three months he had lost twenty-five pounds. He was emaciated and cachectic. The test-meal findings were as follows: Total acidity, 50; free hydrochloric acid, 24; and combined, 26.

February 27, 1908, an exploratory operation was done, which revealed malignant disease of the jejunum two inches below the duodenal-jejunal juncture. There were secondary nodules in the peritoneum and in the intestines, and free fluid in the abdomen. Pathologic examination of a lymph-gland showed carcinoma.

Case 8 (25214).—An unmarried woman, aged 49, had had curvature of the spine since she was eleven years of age. She gave a history of cough and night sweats for two years. Three months before coming for examination she had had gas on her stomach for three days, with difficulty in expelling it, and a sudden onset of pain in the pit of the stomach that worked down around the umbilicus and up to the costal arch; on the duodenal side, which caused obstruction 4. This lasted one hour. Since that time she had had cramps from fifteen to thirty minutes after meals, lasting an hour, after which there was tenderness over the epigastrium. Occasionally the right costal pain penetrated to the back. There was no nausea or vomiting. The appetite was poor. There was a loss in weight of from ten to twelve pounds. The bowels were constipated; there was black passage, but no blood. A tumor had been noticed two weeks before. A mass was found in the left side of the abdomen, and diagnosis of a tumor of the splenic flexure was made.

July 8, 1909, an exploratory operation was done, and a carcinoma was found beginning at the jejunum, with the involvement running through the mesentery of the small intestines and the region of the superior mesenteric artery. There were movable nodules on the peritoneum. Death occurred at the patient's home, Oct. 18, 1909.

Case 9 (68893).—A married woman, aged 46, three years before coming to the Clinic, had had an onset of short spasms of severe pain, in the epigastrium, extending through to the back. Morphine was given. There was tenderness afterward, but no fever, no bowel disturbances, and no vomiting until after the use of the morphine. She also had had headache, and more or less dull pain in the right loin. Her appetite was fair. For the past six weeks the epigastric pain had come on for one hour immediately after meals; there was no vomiting. The bowels were constipated. There was anemia with gradual loss of weight of twenty pounds in three years. The test-meal findings were as follows: Total acidity, 48; free hydrochloric acid, 0; and combined, 48. Examination showed a slight fullness in the right hypochondrium and an indefinite cystic left abdominal tumor. A diagnosis of gall-stones and a left abdominal tumor was made.

June 18, 1912, an entero-anastomosis was made just below the obstruction. Carcinoma of the upper jejunum was found about two feet below the origin. The growth involved the entire circumference and the mesenteric glands, and produced obstruction, which in time produced a tumor the size of a fist along the mesentery and spine. A small nodule removed from the mesentery was shown to be carcinomatous.

Case 10 (85886).—A man, aged 43, nine months before coming to the Clinic had had spells of cramping pain from three to four hours after meals, which was relieved only by induced vomiting. The spells occurred at varying intervals, until five months previously, when the trouble became practically continuous, the pain coming on one and one-half hours after eating, with no relief except from induced vomiting of bile and a quantity of foul material which had been in the stomach several days. The patient had had daily lavage and had been able to keep down only a few liquids. The bowels were regular if anything passed through the stomach. The test-meal findings were as follows: Total acidity, 50; free hydrochloric acid, 40; and com-

bined, 10; Oppler-Boas, 2; food remnants, 2. The *x*-ray examination showed carcinoma of the stomach. A clinical diagnosis of pyloric obstruction and dilated stomach was made.

June 17, 1913, an entero-anastomosis was made, and a ring carcinoma high up in the small intestine and nodules in the omentum, inoperable on account of metastasis in the omentum, was found.

Case 11 (86605).—A man, aged 57, had an onset of trouble with an attack of diarrhea nine months before examination. He vomited, occasionally, a sour, green material from two to three hours after meals, and complained of soreness in the ares of the right costal margin and in the epigastrium. He had avoided acids and meats, and had lost twenty-five pounds in weight and much strength. The bowels were constipated, but there was no melena. The test-meal findings were as follows: Total acidity, 48; free hydrochloric acid, 40; and combined, 8; food remnants, 2; altered blood, 1; sarcines, 3. Physical examination showed cachexia and a movable, tender, right epigastric mass. The *x*-ray showed pyloric or duodenal obstruction. The stomach and duodenum both contained a six-hour residue. A loop of small bowel was caught up behind the stomach, and contained residue. A diagnosis of jejunoduodenal obstruction (ulcer-carcinoma?) was made.

July 2, 1913, a resection of the upper jejunum and an end-to-end anastomosis were made. A jejunostomy five inches below the anastomosis was made for feeding purposes. The operative findings were a spool carcinoma one and one-half inches below the transverse mesentery of the colon and the upper jejunum. An inflammatory gland was removed from the spine. There was a sharp, horny deposit, a spur on the lumbar spine behind the carcinoma. Pathologic examination showed carcinoma of the jejunum.

Case 12 (134048).—A man, aged 44, came to the Clinic complaining of the onset, six months before, of a feeling of fullness and weight and distress immediately or soon after meals. This passed away of itself, or after induced vomiting of bile without blood or retained food. The patient had lost forty pounds in weight in the first three months, but not much since that time. For the past two months he had been on light diet, and had rarely vomited. The bowels were very constipated for the previous month or more. The test-meal findings were as follows: Total acidity, 36; free hydrochloric acid, 22, and combined, 14; the food remnants were 1+. Examination revealed a mass just below the umbilicus. The *x*-ray showed a No. 2 residue, a palpable tumor mass, chiefly if not wholly extrinsic, and dilatation of the upper small bowel, evidencing obstruction. A diagnosis of cancer of the colon was made.

June 26, 1915, a resection of one foot of small intestine, including the growth, and an end-to-end anastomosis were made. A primary carcinoma of the small intestine encircling the entire bowel six inches below the duodenum and adherent to the transverse colon was found; the colon was not involved. Pathologic examination showed extensive carcinoma of the jejunum with no glandular involvement.

Case 13 (151015).—A married woman, aged 34, had had an operation in May, 1915, when eight inches of bowel were removed for inflammation. A button had been used. Two months prior to the operation an abdominal mass had been felt in the right umbilical area. The pain was felt chiefly when the patient was in a reclining position and she was obliged to lie on her right side. Constipation was marked. A good recovery was made from the operation, and she gained eight pounds in weight. Two months later a mass which gradually became larger, was again felt to the left and at the level of the umbilicus. The patient's back ached, she was constipated, and injections gave distress; distention, 2; the patient was anemic and thin. The irregular, firm, movable mass suggested carcinoma. A diagnosis of recurring abdominal tumor was made.

Jan. 29, 1916, a resection of eight feet of intestine with a mass of glands was done, and an end-to-end anastomosis was made. A carcinoma of the upper jejunum about sixteen inches from its origin was found. A large mass of glands extended down on to the superior mesenteric vessels, which were probably cut and tied. The transverse colon was dissected free. The growth and the glands were necrotic, very foul, and adherent to the abdominal wall. The blood-vessels ran into the growth and were considerably choked. Collateral circulation could be obtained. Pathologic examination showed carcinoma of the jejunum.

Case 14 (159902).—A man, aged 45, four weeks before coming to the Clinic had an acute attack of abdominal pain, which localized in the right iliac fossa. The patient had kept at his work, and four days before there had been a very severe exacerbation of pain in the same place, followed by vomiting and, he thinks, fever. A bloody diarrhea and tarry stools and the formation of a mass followed. There was no bowel movement for two days prior to examination. The patient could scarcely walk for pain; and he had lost twenty-three pounds in weight. Examination revealed a mass in the right iliac fossa. A diagnosis of appendiceal abscess was made.

May 19, 1916, a resection of twelve inches of the small intestine, and an end-to-end anastomosis were done. The operation revealed carcinoma of the small intestine (about the middle of the jejunum), with extensive glandular involvement, which could not be removed. A resection was done on account of the danger of obstruction, from which the patient was evidently suffering. The appendix was not diseased, and was not removed.

Case 15 (189091).—A man, aged 65, had had spells of pain lasting from seven to ten days, with intermissions of from one to three weeks. For three months before the pain had been almost constant, except during the last ten days. The pain came on for half an hour soon after eating. There were peristaltic unrest and rumbling, and then ease until food or drink was taken. There were no vomiting and no sour eructations, but some gas and belching. The patient's appetite remained good, but he was afraid to eat and had lived on liquids during the past two months. When the stomach was empty he had no pain. He had lost ninety pounds in weight. The bowels were usually normal; but several times during the previous four months the stools had been liquid, and there were several movements a day. The food remained just as it had been taken into the stomach. On examination for test-meal findings, the stomach was found to be apparently empty. Pressure on the stomach forced forward a large amount of gas and liquid material; there was no

mass palpable. The *x*-ray examination showed the stomach and colon to be negative. A diagnosis of chronic intestinal obstruction was made.

April 4, 1917, an entero-anastomosis of a completely distended loop and of a collapsed loop of the small intestine was done. A gland was excised from the mesenteric attachment beneath the growth, and a small gland was excised from just beneath the serous coat. An inoperable ring carcinoma of the small bowel, beginning apparently in the jejunum, was found. The bowel, up to the growth, was markedly dilated, and was almost completely obstructed. Ascites and nodules in the right lobe of the liver which had the characteristic feel of carcinoma, were noted. Pathologic examination of a specimen from the jejunum showed it to be carcinoma.

Case 16 (241941).—A man, aged 47, had had two previous operations, one in February, 1917, for the removal of a growth from the left shoulder, and the other in Septemebr, 1917, for the removal of glands from the neck and arms (sarcoma?). Two and one-half months before coming to the Clinic, the patient had noticed an intermittent pain to the left of the umbilicus and a little below, which came on for a few minutes and then disappeared. The pain was not affected by food, as the patient felt well after eating, and there was very little belching and no nausea or vomiting. He was sometimes wakened at night by pain in his side, but had not been kept awake. Two months before his examination here he had had an acute attack of pain and a physician was called. There was a weight loss of twenty pounds in four months. The patient was put under observation and two weeks later three hours after eating he had an attack of pain, lasting a few seconds, to the left of the umbilicus, and he vomited considerably more than he had eaten for breakfast. This was repeated the following day. The test-meal findings were as follows: Total acidity, 36; free hydrochloric acid, 20; and combined, 16. The *x*-ray examinations of the stomach and colon were negative. The diagnosis was indeterminate.

September 9, 1918, a short-circuiting entero-anastomosis around the tumors was done. The operative findings were as follows: Melano-sarcoma (?) or melano-epithelioma (?) of the small intestine secondary to a melano-epithelioma removed from the left shoulder elsewhere. The upper portion of the small intestine was markedly dilated by three tumors involving the mucous membrane of the intestine. The walls of the intestine were adherent to one another, causing obstruction, and were greatly thickened. There were two tumors about three inches apart and eighteen inches below the upper tumor, which was situated in the jejunum, about two feet from its origin. There were numerous large glands in the mesentery. There were a large tumor in each adrenal region, overhanging the kidneys, and a small tumor in the liver. Pathologic examination of the gland showed it to be a melano-epithelioma.

SUMMARY OF CASES OF CARCINOMA OF THE JEJUNUM.

Eight of these cases occurred in men and three in women. In most instances, the patients had had symptoms only a few months, in some only a few weeks. In one case, however, some intestinal symptoms had been present for twenty years, and in two cases symptoms had been present for two and three years, respectively. The histories do not show great similarity, and it was almost impossible to diagnose the nature or location of the obstruction, but obstruction was present in every instance. Occasionally the tumors could be felt, although this was not helpful in differentiating. Abdominal pain was severe and colicky, and had occurred intermittently for some weeks. There was no definite localization of the pain, although it was most frequently in one or the other of the iliac fossæ. Weight loss was very rapid, and in most cases was marked at the time of the examination.

SIX CASES OF CARCINOMA OF THE ILEUM. AVERAGE AGE OF PATIENTS, 50 YEARS.

Case 17 (907).—A man, aged 48, had begun to lose weight twenty-one months before. He had had some pain through the abdomen, colicky but never severe. He had been constipated for a year, and the abdomen had been distended for six weeks previous to an exploratory laparotomy, in which adhesions were found. He gained weight, and had felt well for the next three months, when he again lost weight, and pain and constipation increased. He vomited for two or three days, when there was distention of the lower right side. Examination showed a probable mass in the right hypochondrium, and chronic obstruction (malignant?) was diagnosed clinically.

January 22, 1907, resection of the small intestine and eight inches of ileum was done. Pathologic examination showed adenocarcinoma. The patient died January 30, 1907.

Case 18 (2263).—A man, aged 53, came for examination, complaining of having had constipation and morning diarrhea for many years. He had also had symptoms of obstruction for the previous six months, that is, gas and distention, and at times a great deal of pain across the abdomen, particularly on the left side. Examination showed an irregular mass in the left hypochondrium. A clinical diagnosis of tumor of the splenic flexure was made.

July 10, 1907, a resection of fourteen inches of the ileum was done for conglomerative tuberculosis and obstruction. Necropsy revealed carcinoma of the small intestine; the glands of the mesentery were involved.

Case 19 (9420).—A married woman, aged 44, had had attacks of indigestion for ten years, with food distress and gas; vomiting gave relief. For the past year the spells had been worse, with pain in the epigastrium and to the right. Distention, sudden chill, increased pain, black loose stools, vomiting of a green substance, but no blood, had been noted. Morphine had been given for the pain. The last attack continued for two weeks. The patient had lost twenty pounds in weight. The test-meal findings were as follows: First test, total acidity, 14; free hydrochloric acid, 0; combined, 14; and a trace of blood; second test, total acidity, 18; free hydrochloric acid, 0; combined, 18; a trace of blood; lactic acid ?.

June 22, 1908, six inches of the ileum were resected. A fibrous polyp the size of an egg was found; it was causing intussusception of the ileum eighteen inches above the ileocecal coil. The pathologic examination showed a malignant polyp of the ileum.

Case 20 (36824).—A single woman, aged 56, had had occasional shooting pains through the lower abdomen seven months before. Four months before the onset

she had been distressed with gas three to four hours after meals, and had vomited. Her physician had stated that it was "kidney trouble," and had put her on a milk diet. In four or five days she returned to the ordinary diet because of increased distress from gas and nausea, which continued up to the time of our examination, with frequent spells of vomiting. Her appetite had been good. She had lost eight pounds in weight in four weeks; her bowels were constipated, worse during the last four months, but during this time she had had two attacks of diarrhea, lasting from two to four days. The test-meal findings were as follows: Total acidity, 34; free hydrochloric acid, 26; and combined, 8. An irregular firm mass filling the pelvis and to the left was palpated. There was a small nodule in the vagina. The clinical diagnosis was pelvic tumor (malignant?).

April 27, 1910, the small intestine was resected; fourteen inches of the ileum were removed for carcinoma of the lower ileum; a subtotal abdominal hysterectomy was done; both ovaries and tubes were removed because of secondary carcinoma; and a section of the bladder was also excised because of secondary carcinoma. The pathologic examination showed carcinoma of the uterus, tubes, ovaries and of the intestine. May 1, 1910, the patient died of general peritonitis.

Case 21 (88325).—A man, aged 54, two years before coming for examination had begun to feel as if his stomach were filled with gas immediately after eating. He grew gradually worse but his appetite remained ravenous. As soon as he had eaten the epigastrium became sore and painful. He seldom vomited and never vomited blood; the first time the vomitus consisted of the food eaten the previous day and after that the food eaten several hours before. He had from three to four bowel movements a day, but there was no blood or tarry stools. The test-meal findings were as follows: Total acidity, 8; free hydrochloric acid 0; combined, 8; food remnants, 1. The *x*-ray showed an hourglass stomach and obstruction at the pylorus, probably ulcer. Gastric ulcer or probable carcinoma was diagnosed clinically.

July 26, 1913, a lateral entero-anastomosis around the carcinoma was done. The operative findings were as follows: Inoperable carcinoma of the cecum, with secondaries in the omentum, adherent to the posterior outer abdominal wall without obstruction; a carcinoma high up in the ileum, about the middle of the small intestine, with marked obstruction, and a ring carcinoma, probably the primary origin. Death occurred August 5, 1913. Necropsy was refused.

Case 22 (250604).—A man, aged 47, had had, beginning four or five weeks before examination, spells of epigastric fullness with nausea and vomiting of brown, coffee-ground material. There had been a cramp-like mid-abdominal pain, causing the patient to double up, and an unusual rolling of the bowels. The spells came on after a day of constipation, and were relieved by enemas. The constipation was followed by an unusual thirst and diarrhea for from one to two days. The patient's appetite had been good between attacks; he had lost thirty-four pounds in weight. The test-meal findings were as follows: Total acidity, 12; free hydrochloric acid, 0; and combined, 12. Examination revealed free fluid in the abdomen and increased peristalsis. No masses were palpated. The left epigastrium was enlarged, but not tender. The *x*-ray examination showed obstruction of the small intestines. A diagnosis of partial intestinal obstruction was made.

November 13, 1918, a resection of about three inches of bowel with the tumor mass was done, and an end-to-end anastomosis was made by splitting the distal ileum about one inch to increase its circumference (C. H. Mayo method). A small ring carcinoma of the ileum was found completely encircling the bowel eighteen inches above the ileocecal valve and forming complete obstruction. The entire small intestine proximal to the growth was enormously distended, very thick walled, injected, and edematous. The carcinoma had perforated through the serosa, but there was no apparent glandular involvement and no metastasis could be made out. There was free fluid in the abdomen. Pathologic examination showed ring carcinoma of the ileum. The patient died November 18, 1918.

SUMMARY OF CASES OF CARCINOMA OF THE ILEUM.

In four of the six cases of carcinoma of the ileum the symptoms were of short duration, being present from one to twenty-one months. In one case there had been indefinite intestinal symptoms for ten years, and in this particular instance the lesion formed on a degenerating polyp of the ileum. The tumor might have been producing the symptoms all of these years. In one case there was a history of diarrhea for two years. The principal lesion was a carcinoma of the cecum, and the tumor in the ileum was not responsible for the symptoms. It was impossible to determine the location of the tumors from the clinical histories and in most instances a general diagnosis of intestinal obstruction was made just as in the cases of tumors of the jejunum.

TWO CASES OF MULTIPLE CARCINOMA OF THE SMALL INTESTINE.

Case 23 (75198).—A man, aged 68, three months before coming for examination had had an onset of doubling epigastric pain with distention and sourness, after almost every meal. The patient thought that the gas did not pass up or down. When the pain was severe, it went through to the back. For a month he had been eating nothing but koumiss on account of the pain. There was no jaundice or vomiting. The weight loss was thirty pounds. The test-meal findings were as follows: Total acidity, 48; free hydrochloric acid, 0; and combined, 48. Examination revealed a small mass in the right iliac fossa, which was quite movable, also a small mass low in the left epigastrium, and a nodule below the right axilla. Possible carcinoma of the stomach with probable metastasis was diagnosed.

November 12, 1912, an exploratory operation was done. Many large tumors the size of a lemon, encircling the small intestine in different areas, but not narrowing the lumen, were found; there was no obstruction. The glands of the mesentery were involved, and there was free fluid in the abdomen. One large mass was found in the pelvis. The condition did not appear characteristically malignant. Pathologic examination of a gland from the mesentery showed carcinoma. Death from pulmonary embolism occurred November 24, 1912.

Case 24 (145438).—A married woman, aged 56, came to the Clinic, vomiting. The husband stated that the

vomiting had persisted for the previous two and one-half months, and at the onset had contained much bile. The patient had no appetite, and she experienced a great deal of abdominal pain. The bowel movement was somewhat difficult. She was able to drink water, and thinks that this had "preserved" her. She had eructations and some gas. Lying on the right side seemed to relieve the vomiting. Examination showed marked emaciation, nausea and retching, and a suggestion of a mass or fullness in the right abdomen. A diagnosis was made of gastric obstruction (carcinoma?).

November 15, 1915, resection was done of three feet of bowel, beginning three and one-third feet below the jejunum. A side-to-side anastomosis was made. The operative findings were a broad-based, pedunculated, cauliflower-like carcinoma of the jejunum about four to five feet from the origin, with intussusception of three feet of bowel. The exploration of the stomach and the duodenum was negative. The common duct was greatly distended. The pelvis and appendix were not examined. Pathologic examination showed a broad based, pedunculated carcinoma, with extension through to the serosa. Death occurred November 16, 1915, and necropsy revealed a papillary cystadenoma of the jejunum (removed at operation), a papillary cystadenoma of the duodenum, cirrhosis of the liver, cholangitis, and chronic cholecystitis (strawberry type) with papilloma. There was no metastasis.

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DISCUSSION

Dr. Arthur Dean Bevan (Chicago, Ill.): Mr. Chairman: I was very much interested in Dr. Judd's paper, and I think it opens up a rather unusual field, but a field that is nevertheless exceedingly important. The experience in our own service has been very much the same as in the larger service at the Mayo Clinic. We have had no case of primary carcinoma of the duodenum which we have recognized as such and operated on, except several cases of primary carcinoma of the ampulla. We have, however, had a number of cases of primary carcinoma of the small intestine; that is, in the upper jejunum, and they have presented some very interesting problems, from both the standpoint of diagnosis and the standpoint of therapy. The question of carcinoma of the small intestine high up gives much the same picture as a pyloric obstruction, but some points are very different. Dr. Judd mentioned one of these points which has impressed us in many cases, and that is the vomiting of a large amount of material, not only the accumulation of material in the stomach, but in the entire jejunal loop. And another thing is attacks of partial obstruction, very much resembling the partial obstruction that one has in the large intestine which have been temporary and recovered from, but which have been fairly acute.

In connection with the diagnosis, as Dr. Judd showed you in the very excellent *x*-ray, one can make the diagnosis with much more certainty by means of the *x*-ray than in any other way. The diagnosis of the dilated small intestine is very different from the dilated large intestine, and all the large loops or pockets in the large intestine are quite different from those linear, pearly infiltrations found in the loops of small intestine.

One word in regard to the therapy that has impressed itself upon us very much, and it is this: We have given up the idea of making an end-to-end anastomosis in these cases. I speak very feelingly on this point. I think a lateral anastomosis is much safer for the patient in these cases of carcinoma of the small bowel,—so much safer that we do not hesitate, even in cases of pretty definite obstruction, to do a lateral anastomosis, and when we crush the intestine and evaginate that, including a large section, at least an inch, in our first invagination with our first suture, and make a closure with catgut and then follow just the same procedure as in gastro-enterostomy.

We have met with the obstruction in the jejunum and duodenum several times. In one of the cases we failed absolutely to make a diagnosis even at the operation. I operated on a case of my colleague's, Dr. Sippy, with definite indication of obstruction at some point, and we examined every point except the junction of the jejunum and duodenum. Another operation was necessary within ten days, and then we had the good sense to make an examination at that point, and were able to make a lateral anastomosis. In another case we had to make a gastro-enterostomy. We have watched that case for a number of months, and it has been very interesting. We have thrown the whole jejunum into the stomach in the sense that it functionates as the stomach. It does very well if the patient washes out his stomach twice a day. He is in very good condition, has gained in weight, and has no trouble if he washes it out twice a day.

One other point which Dr. Judd did not mention, and I think properly so, as it did not come within the title of his paper. That is the occurrence of malignant disease within the small intestine. We have run across several times the lymphosarcomas, and they are interesting from this standpoint—they are the only tumor within the small intestine which gives us a bigger caliber than the normal intestine. The cases we have seen have not been associated with obstruction at all, but with blood in the stools, and they have been a definite, palpable mass. I think there is a fairly good prognosis if they are early encountered, but on account of their silent course they are usually diagnosed rather late. My impression is that carcinoma of the small intestine, when early diagnosed, from our limited experience, gives a favorable prognosis. We have several patients who have been well for a number of years after circular resection for carcinoma of the small intestine.

Dr. E. S. Judd (closing): Mr. Chairman: There is nothing that I care to add, but I wish to thank Doctor Bevan for his discussion.

HEMORRHAGE FOLLOWING TONSILLECTOMIES*

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While not of frequent occurrence, troublesome hemorrhage following tonsillectomy occurs often enough to make this subject worthy of our consideration.

Balanger says that the greatest objection to operating for the removal of tonsils is the danger of hemorrhage, and he adds that, while the danger is partly imaginary, it is also very real in adults, in that severe and dangerous hemorrhage occasionally occurs in operating on the tonsils. He says the most frequent site of arterial hemorrhage is about the middle of the sinus tonsillaris, where the tonsillar branch of the facial pierces the superior constrictor muscle of the pharynx.

Other points of hemorrhage are usually limited to the inferior portion of the sinus tonsillaris, where the tonsillar venus plexus is located. There is no doubt that the fear of hemorrhage is frequently an important factor in the decision of the parent or patient when considering the removal of troublesome or infectious tonsils, which should be removed to restore or safeguard the health and well being of the patient.

The operation for the removal of tonsils and the attitude of the public in reference to this important and very frequent procedure have undergone a very marked and needed change during recent years.

It is a long look from the day when the patient came in and, without any preparation whatsoever, was placed in the chair and a portion of the tonsil, together with whatever happened to engage in the instrument, was sliced off, and the patient allowed to leave the office, thinking he had undergone a beneficial operation, to the present time, when tonsillectomy is looked upon by every laryngologist and a large percentage of the laity as an operation worthy of, and necessitating, all the care and aseptic precautions surrounding any surgical operation of similar magnitude and importance.

When we look back to the careless and hurried work done by many under exceedingly unfavorable conditions, where the patient or patients were frequently left to the care of unskilled hands or allowed to drive long distances to their home, we wonder that there were not more cases of troublesome or even fatal hemorrhage than we ever heard of.

*Presented before the Sioux Valley Eye and Ear Academy, Sioux City, Iowa, January 21, 1919.

In order to secure comprehensive and reliable data on this subject, under present methods, a questionnaire was addressed to fifty laryngologists of wide experience, all of whom reported except two, and I present the following résumé of the correspondence. The questions were as follows:

No. 1. In what per cent of tonsillectomies have you had troublesome hemorrhage?

No. 2. In what per cent of tonsillectomies have you had dangerous hemorrhage?

No. 3. Is your per cent of hemorrhage greater following local or general anesthesia?

No. 4. What per cent of your cases are operated on under local anesthesia?

No. 5. What per cent of your cases are operated on under general anesthesia?

No. 6. What general anesthetic do you use?

No. 7. What local anthesthetic do you use?

No. 8. What precautions, if any, do you use to avoid hemorrhage?

No. 9. How many cases of fatal hemorrhage have you known following tonsillectomies? (Note that I do not ask, how many cases of fatal hemorrhage have you had, but how many have you known.)

No. 10. How long do you keep your tonsillectomy patients under observation before they are dismissed?

No. 11. What mechanical measures do you use to control hemorrhage following tonsillectomy?

No. 12. What other methods of treatment do you use to control hemorrhage after tonsillectomy?

In answer to question No. 1, the reports indicated that the per cent of troublesome hemorrhage ranged from one-half of 1 per cent to 8 per cent, the majority being from 2 to 5 per cent. The per cent of troublesome hemorrhage being 4 per cent greater in adults than in children.

In answer to question No. 2, relative to dangerous hemorrhage, 10 per cent of the answers were zero, the balance ranging from 1 to 6 per cent.

To question No. 3, as to whether the per cent of hemorrhage was greater following local or general anesthesia, the answers were about 50-50, the majority stating that the per cent under general anesthesia was higher than under local an-

esthesia. About 30 per cent, however, stated that the hemorrhage under local anesthesia was higher than under general, but many qualified the statement by saying that this was accounted for by the large per cent of adults operated on by this method.

To question No. 4, as to what per cent of the patients were operated on under local anesthesia, the replies were interesting, owing to the wide range of different methods by different operators. The majority of the replies were from 2 to 90 per cent operated on under local anesthesia. A large per cent average from 75 to 90 per cent of adults.

To question No. 5, what per cent were operated on under general anesthesia, 90 per cent of the replies were in all cases of children. The remaining 10 per cent of replies averaged 60 per cent under general anesthesia.

To question No. 6, what general anesthesia do you use, 75 per cent used ether. The remaining 25 per cent used gas or gas and ether, with a very small per cent using chloroform, only three using the latter anesthetic.

To question No. 7, what local anesthesia do you use, 25 per cent used one-tenth of 1 per cent cocaine solution injected into the tonsil and pillars. Ten per cent used 20 per cent cocaine solution applied to the surface, followed by an injection of one-half of 1 per cent cocaine solution. Ten per cent used one-fourth of 1 per cent cocaine solution. Ten per cent used cocaine and apothesine, and 30 per cent used about 1 per cent of novocaine solution.

To question No. 8, what precautions, if any, do you use to prevent hemorrhage, 85 per cent said nothing was done previous to the operation to avoid hemorrhage. Three out of the fifty gave intravenous injection of coagulose to patients that were suspected of being bleeders. Two gave pituitrin hypodermically where bleeding was feared. One, in suspected bleeders, always made a blood-clot test, and, if found to be below normal of seven or eight minutes, had the patient eat gelatine and gave calcium internally several weeks before the operation.

To question No. 9, how many cases of fatal hemorrhage have you known following tonsillectomies, one prominent operator reported twelve cases of fatal hemorrhage, one reported four cases, one reported three cases, four reported two cases, and others reported none.

To question No. 10, relative to how long the patients are kept under observation, 80 per cent answered this by saying they kept the patient under observation from five to ten days; 10 per cent, twenty-four hours; and 10 per cent, twelve hours.

To question No. 11, what mechanical measures are used to control hemorrhage, 40 per cent used direct pressure only; 30 per cent used the tonsil clamp or hemostat; 10 per cent suture the pillars with or without the pledget of gauze; 10 per cent ligate the bleeding point; and 10 per cent use the artery forceps without the ligature.

To question No. 12, what other methods are used to control hemorrhage, morphine hypodermically, the ice collar, gargle of peroxide of hydrogen, coagulose, and thromboplastine were used in the ratio as enumerated.

Loeb states that not a few deaths have occurred from tonsillar hemorrhage, and says that response should be made immediately to any call for bleeding after a tonsil operation, and great care should be exercised until all danger is passed.

Joseph Beck made a practice, for some time, of suturing the tonsillar pillars over a pledget of gauze, leaving the pledget in place twenty-four hours in all his adult patients, rather than assume the risk or annoyance of being called later to check a hemorrhage.

We remember the pathetic story narrated by a very prominent specialist in a large city, who was called to operate on three patients for a brother physician, one of whom was the physician's daughter. The work was hurriedly done, so that the surgeon could return by train to the city. The next morning he was horrified to receive a telephone message from the Doctor saying that his little daughter had died during the night from hemorrhage, which he was unable to control.

The very common use, at present, of a suction apparatus, like the Beck or similar machines, for sucking the blood out of the throat and tonsillar fossa during the operation, not only serves the important purpose of keeping the field clear, thus helping to locate a bleeding point, but it also prevents the swallowing of much blood which later distresses and annoys the patient.

Under the primitive methods of operating it was quite common to have the patient swallow a sufficient amount of blood during and immediately following the operation to cause nausea and troublesome vomiting. At present high prices of gauze, a suction apparatus will soon pay for itself in an institution where a great many tonsillectomies are performed.

I do not wish to convey the idea that severe hemorrhage is a common complication, but trou-

blesome hemorrhage does occur so often in this very common operation that it is bound to be met with by all of us at times.

I have made it a rule from which I seldom deviate, to do my tonsil operations in the morning so that the patient may be watched during the day and kept under observation, as, in the majority of cases, the danger from hemorrhage has largely subsided in from two to six hours, and I am seldom called to check a hemorrhage at a late hour.

In our opinion, every patient, and especially adults, following tonsillectomy, should be kept in bed for half a day following the operation, whether done under local or general anesthesia. The nurse should be instructed to watch the patient, keep him lying on the side or tolerably well over on the face, and see that he spits out all the blood, instead of swallowing it; and, if the patient is found to be swallowing or vomiting, an examination should be made to see if there is any hemorrhage; and, if at the end of two or three hours there is still bleeding, it is a pretty good evidence that there is sufficient hemorrhage to call for immediate attention.

While the various forms of tonsil hemostats devised to control hemorrhage may be used, they are, as a rule, unreliable and unsatisfactory, besides being exceedingly uncomfortable and even very painful to the patient. The surer and better surgical procedure, when hemorrhage is found to be continuing, is to have the patient removed to the operating-room, where under proper conditions a pledget of gauze saturated in some mild antiseptic solution is placed in the tonsillar fossa, and the pillars sutured firmly together.

It seems better to use the pledget of gauze rather than suture the pillars without the gauze, as the pledget adds materially to the pressure, and also leaves the fossa in a more normal condition. The sutures should be left intact for about twelve hours, when they are easily removed and the danger of hemorrhage is past.

The procedure of suturing the pillars is more easily performed than ligating the bleeding point, and in my opinion is much to be preferred, as ligation of the bleeding artery is liable to be more difficult and is neither as safe nor simple a procedure as the suturing process.

The various astringents and styptics generally applied to the tonsillar fossa are not only unreliable, but are more or less unsanitary, and are apt to aggravate the inflammation and retard healing. The pillars may be sutured with an ordinary full curved needle or any one of the several needles especially devised for this purpose.

Secondary hemorrhage occurring from two to four days or more after the operation is very infrequent, and is usually due to a detached slough or erosion, which leaves an open vessel. While it may be alarming to the patient, it is seldom serious, as the hemorrhage usually ceases spontaneously. If, however, it should become serious, the pillars should be sutured, as stated above.

Gargles, such as peroxide of hydrogen, are of little value; not only are they apt to prove disappointing, but tend to obscure the real condition. While ice-bags applied externally or small portions of ice held in the mouth may be of use, none of these methods is reliable. Morphine administered hypodermically will relieve the anxiety of the patient, and tend to lessen the blood-pressure, allowing coagulation to take place.

It goes without saying that the method of operation which removes the tonsil entire with its capsule intact, with the least traumatism to the pillars and adjacent tissues, is the procedure that is likely to cause the least hemorrhage. In my opinion such instruments as the Beck Sluder or LaForce tonsillotome, have a smaller per cent of hemorrhage to their credit than the methods where sharp disection is made.

In September last a young women twenty-seven years of age was referred to our clinic, complaining of serious trouble of her throat. About a year before, she had one tonsil removed by an excellent laryngologist, but the hemorrhage was so extreme and difficult to control that her life was nearly lost, and the remaining tonsil was left, and she was admonished never to attempt its removal. As the remaining tonsil was giving much annoyance, an examination for coagulability of the blood was made, and was found to be considerable below normal.

The patient was given coagulose hypodermically, and four hours later a quarter grain of morphine, and the tonsil was removed with the Beck Sluder instrument. The hemorrhage was very moderate, but as a precaution the pillars were sutured over a pledget of gauze saturated with compound tincture of benzoin. Six hours after the operation, moderate oozing of blood occurred, which fully alarmed the patient. A second hypodermic of morphine was administered and no further trouble was experienced.

In looking over the records of 423 tonsillectomies done in our clinic during the last six months, the percentage of troublesome hemorrhage has

been slightly greater under local than under general anesthesia. This is probably due to the fact that all of the local anesthesias were in adults.

To recapitulate:

Troublesome and dangerous hemorrhage from tonsillectomies, according to the data gathered, seems to be about equally divided between the local and the general anesthesia. Troublesome hemorrhage occurs in from 1 per cent to 5 per cent of all patients operated on. Dangerous hemorrhage occurs in from 0.5 to 4 per cent of all cases, and fatal hemorrhage has occurred sufficiently often to admonish us to always be on our guard.

THE USE OF THE CRUDE HYPOCHLORITE SOLUTION ON THE PLAINS OF DAKOTA AT THE TIME OF CUSTER, AND ITS USE TODAY AS REFINED AND PERFECTED BY DAKIN-CARREL*

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Many articles now appearing in the medical journals regarding the Dakin-Carrel solution have brought out a real controversy regarding its merits and demerits, yet there are certain phases of its use which have so far escaped attention.

Within recent years chlorine, either in its gaseous form or in combination with certain bases, has been, and is now being, used more and more in the sciences, particularly along germicidal lines. The value of chlorine as a disinfectant has been known and recognized for many years, either empirically or with some definite knowledge as to its value, but not until bacteriology became a science could its true value as a germicide be definitely estimated and its limitations positively demonstrated.

Labarraque, a Parisian pharmacist whose activities were limited to the early half of the 19th century, prepared a solution which was known as "Labarraque's Disinfecting Solution," or solution of chlorinated soda. It was prepared by mixing a solution of chloride of lime and carbonate of soda in definite proportions. This formula eventually found its way into the U. S. Pharmacopeia, thus giving it official standing as a pharmaceutical preparation. It was recommended as a gargle in "putrid sore throat," or diphtheria, in certain cases of scarlet fever, and also as a dressing or wash in gangrenous wounds. In such cases it was diluted. It was also sprinkled over the floors in sick-rooms or hospital wards, or exposed in shallow vessels. It was sometimes administered internally in zymotic diseases, in doses of from 20 to 30 drops in half a tumbler of water. It was also found useful by the housekeeper for bleaching small articles of linen or cotton by immersion and exposure to the sunlight.

Although its place was retained in the U. S. Pharmacopeia of today, its use has gradually been replaced in medicine by other preparations of supposed greater value, until its use has been for some years practically neglected.

The increasing use of chlorine in purifying the water supplies of many cities today, and as a disinfectant in many other ways, has again called attention to chlorine, its value becoming gradually re-established, and in the Dakin-Carrel solution, which is practically the old Labarraque solution, more scientifically prepared and more scientifically applied, is again finding its place as one of the really valuable preparations in surgical procedure. The old method of preparing it as outlined by Labarraque left much to be desired, as in many cases it acted as an irritant to healthy tissues and Dakin and Carrel demonstrated by scientific methods how the value of chlorine could be used to advantage by limiting the chloine to a definite amount, or percentage, and diminishing its alkalinity so as to overcome its irritating quality, thus obtaining its true value and removing all objectionable features.

This is, however, only preliminary to the object of this paper, as, in reading the present-day literature of the Dakin-Carrel solution, it recalls to my mind the name of one of the pioneer surgeons of the state, whose self-sacrificing work seems to have passed without even having his name recorded in the history of the state. Always faithful to duty, through danger, storm, and cold, his modesty being the predominating

*Read at the 31st annual meeting of the North Dakota State Medical Association, at Fargo, June 19 and 20, 1918.

feature of his sturdy character, who never failed to respond to the call of duty and who was one of the first to practice surgery upon the Dakota plains, Dr. H. H. Ruger. He used it in the form of Labarraque solution in the early days on the frontier, during the 70's and 80's. At that time the settlers' cabins were few and far between, and the pioneer who traveled the plains was often caught out in the storms and blizzards; and, if he was sufficiently fortunate as to escape with his life, frozen limbs were not uncommon.

Dr. Ruger came to the Territory of Dakota with the 7th Cavalry as acting Assistant Surgeon, then under the command of General Custer, in April, 1873. They followed the trail from the south, where they were previously stationed, to Yankton, and from there they marched northward, following the Missouri river for about five hundred miles, until they reached Fort Rice. From Fort Rice their course was almost due west along the original survey of the Northern Pacific Railway, and their summer's campaign became known as the "Expedition of the Yellowstone." Dr. Ruger served with the 7th Cavalry under Custer during all of this expedition, and came with Custer to Fort Abraham Lincoln in the autumn of that year. From there he was transferred in the winter of 1874 to the 17th Infantry, under General Chrittenden's command, and was stationed at Ft. Abercrombie. From there he was transferred to Ft. Seward in the fall of 1875 to serve with the 20th Infantry, under command of Captain John Patterson. It was there, in the summer of 1876, that news of the Custer massacre reached them.

In the fall of 1876, he was transferred to Ft. Totten, serving with the 20th Infantry, under command of Colonel Lewis Cass Hunt. He remained with the 20th Infantry at Fort Totten until his retirement, in 1884.

During his eight years at Fort Totten he practiced medicine among the Indians at the request of Major James McLoughlin, their Indian Agent at that Fort, and was known to the Indians as "Big Medicine Man."

It was there that I first met him and learned to know him as one of God's noblemen. In his practice during all these years he had used Labarraque's solution in suppurating wounds of every character, and learned its true value, as well as its limitations. He had received his supply through the quartermaster's department, and had become familiar with its variations in therapeutic strength. After his retirement he located at the city of Devil's Lake, on the north shore of the lake directly opposite from Fort Totten. Mr. James J. Hill had extended his railroad, now known as the Great Northern, to the lake, which was its terminus for a number of years, before pushing on to the Pacific Coast. The settlers' shacks were scattered, and many cases of freezing came under Dr. Ruger's care. His method of treatment was, first, to wrap the limbs in absorbent cotton, holding it in place with a roller bandage, keeping the dressings saturated with a diluted Labarraque solution until the line of demarcation was definitely formed, before attempting amputation.

I had learned the profession of pharmacy in the east before "going west to grow up with the country." When, one day, I heard Dr. Ruger say that he needed a supply of Labarraque's solution, this brought from me the suggestion that I could make it. He consented to have me do so. He was so well satisfied with the results obtained that I continued to supply him for a number of years. As medical assistants were not plentiful, I was given the privilege of assisting him in a number of cases of the character mentioned, and was impressed with the fact that, when these cases were first dressed, it appeared to me that many limbs were past saving, and yet, when amputation was done, several weeks after, I being called upon to give the anesthetic, the very small amount of tissue removed impressed me with the remarkable saving qualities of the solution.

All this is history now. I have since studied medicine, and have practiced a quarter of a century, during which time conditions have so changed that the state is now covered with comfortable homes, so that cases of freezing of any magnitude have almost become unknown.

The controversy over the value of the old solution of Labarraque has passed, but, under the scientific methods of preparing it as outlined by Dakin and Carrel, I am doubly impressed with its possibilities, and I firmly believe that these scientists are upon the path which will lead the profession to a correct understanding of its valuable properties, and to its extended use by those who today are doing naught but criticise it.

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MINNEAPOLIS CLINIC WEEK MAY 5-9, INCLUSIVE

Again we give Northwestern men notice of the Clinic Week in Minneapolis from May 5 to 9, inclusive.

The Executive Committee has decided on a change in the program, in order to provide what the men from the Northwest really want. A plan has been outlined, which will give the visitors surgical, medical, and specialty clinics every forenoon, from whatever hour is decided as a beginning until not later than 1 P. M. Each afternoon will be devoted to a symposium. Every day a new subject will be presented and illustrated, either by ambulatory cases, lantern-slides, or films, developing all of the different conceptions of the symposium. The surgeon, the internal medicine man, the eye and ear man, the throat and nose man, the neurologist, the pediatrician, the gynecologist, each will give an outline of his attitude toward the subject under discussion, so that we may have an all-round clinic.

The Executive Committee has also decided that the subject of each symposium shall be one which will be of interest to all of the visitors who may attend the Clinic, the idea being to give the man out of town and the man in town, as well, the different phases of the subject under consideration. The selection of these topics will be made later; but our readers may confidently expect that the subjects will be of general interest, embracing, especially, cases that are commonly seen in country practice, as well as in city practice.

The time to be occupied in the presentation of papers in a symposium will be practically an hour and a quarter, thus giving time for from four to six short, snappy papers, or the presentation of cases; and then a general discussion will follow, in which the out-of-town men are expected to take a prominent part. It is a well-known fact that often the man in the country sees things at an angle different from that of the man in the city, and will be able to present some very interesting phases of his own, showing how necessary it is for the man in the country to be an all-round, well-qualified man, educated by his experience in cases in which he is wholly dependent upon himself.

One of the clinical features, too, will be the exhibition of *x*-ray work, pathological specimens, surgical instruments, and other equipment familiar to physicians and surgeons.

On Monday evening, May 5, the Hennepin County Medical Society will entertain the out-of-town visitors at a banquet, probably at the Radisson Hotel. The banquet last year was considered very successful, and gave an opportunity for men to meet and greet one another, and to make new acquaintances and renew old ones. The remaining evenings of the week will not be given to work of any sort, thus leaving the visitor free to enjoy himself as he sees fit. We do not intend to crowd the guest too much with medical or surgical topics, but to give him a variety of subjects to consider. Neither will all of his time during the day be occupied with surgical work entirely. One of the chief ideas this year is to give the men more medical work, more specialty work bearing upon their daily practice, and thus to entertain him with a greater variety of subjects.

Clinic Week in Minneapolis, first observed in 1918, will be observed yearly and a program will be made to meet the needs of the profession, in both the country and the city. Minneapolis this year has larger clinical facilities than ever before, perhaps especially due to the erection of the new St. Mary's Hospital, with its twelve operating-rooms, and plenty of other space in which a number of clinics can be given at one time.

Subsequent issues of THE JOURNAL-LANCET will contain further announcements of the Clinic and the progress of the program committee, and we hope to be able to present a program in full before the Clinic Week begins, in order that the visitor, if he cannot be present all the week, may choose the days in which he thinks he will get the most out of his visit.

THE RETURN OF INFLUENZA

During the past two months comparatively few cases of influenza have been reported, but in its place the population have suffered from intermediate conditions, largely sore throats, and colds in the head, occasionally involving the upper bronchi. As a rule, the symptoms have not been severe, and many people are going about their daily occupations simply snuffling and sniffling, coughing, perhaps, but not sick enough to give up their work and go to bed.

A rather large number of instances have been recorded where influenza raged throughout a county, or through a section of a state, with the small towns in the immediate vicinity of a large adjoining town escaping entirely. Word comes to us now that in these hitherto free towns influenza has returned with the same violence that inaugurated its initial appearance, sweeping through the town and the adjoining country. The same state of affairs has appeared in the cities, but to a lesser degree, particularly in the numbers and in the virulence of the attack; that is, there are fewer cases of pneumonia and a reduced death-rate. Perhaps the epidemic is gradually wearing itself out, or perhaps it is following its expected course, a wavelike movement, in which there is a rise and fall in the number of cases and in the severity of the disease.

One other noticeable feature is that a chain of symptoms develops from one to three months after the initial influenza. They have appeared in various forms, involving different organs of the body, especially the nerve-trunks, causing mental disorders, and, particularly, periods of long exhaustion, accompanied by a weak myocardium. These myocardial cases are in some instances very serious. Not infrequently patients are found who have been ordered out of bed before they were really able to get up, thus putting the heart muscles under tremendous strain, and fastening upon them a condition which may last for months, or may be permanent. Consequently, the old rule, which was adopted early in the epidemic, was to keep the patient at rest for a sufficient time to allow him to recover his muscular and nervous balance.

We may hope with some degree of confidence, that the epidemic will die down during the summer months, but we must be prepared for a renewal of the fight during the next fall and winter, for it is hardly probable that so widespread a disease, involving enormous numbers of the population, will quiet down in one, or in even two years. Every precaution should be taken to prevent the transferrence of the influenza and pneumonia germ to others. Unless this is done, we may expect that the people who have been under tremendous strains of all kinds, will have a lessened resistance, and will be unable to fight off the disease when it comes again.

By the time the next epidemic approaches it is to be hoped that the real cause may be discovered, and that, if we are to consider the further use of vaccines, we may have a better grade, or, at least, a more scientific grouping of what is at present a non-toxine.

"LETHARGIC ENCEPHALITIS"

The above title is a very attractive one to emphasize a disease which has been long noted, and which has existed over a period of many years, but never has been defined or classified as a lethargic encephalitis. For many years most of the encephalitides have been included under meningitides, under a very general term known as phrenitis. Even Hippocrates recognized a form of inflammation of the brain from traumatic causes. The term *encephalitis* was used as early as 554 A. D. by Actuarius. The more modern history of the term, however, begins in the nineteenth century, and was described by various authors, who spoke of inflammatory and non-inflammatory types. Strümpell, in 1884, opened up a large study of the infective type, which has been followed out in later years, but never before has been described as a lethargic type of disease. Strümpell used as his term "polio-encephalomyelitis." Other authors have called it "polio-encephalitis," superior or inferior, according to its locality, and this probably covers the disease in its proper form.

Since the epidemic of influenza has been raging, the lethargic type has loomed up, or, at least, has been more clearly recognized clinically as a little different form of influenza encephalitis. It is very liable, in some instances, to affect the upper and superior portions of the brain, where it is associated with weariness and stupor, or lethargy, as it is now sometimes called; and it usually causes a rise of temperature, complete or partial immobility, and eye symptoms, such as nystagmoid movements.

Another type of these patients of whom the writer has two under observation at the present time, is one of the inferior forms in which the victim is in a state of lethargy, and partial helplessness, and at times they suffer great pain, and are more or less confused, and, suddenly,

without warning, there develops an ophthalmoplegia with ptosis in the same eye, together with a dilated pupil.

The only stumbling-block in one of these cases is that the woman had a previous amputation of the breast (six years ago) for carcinoma, and, although the symptoms are now lining up with the lethargic encephalitic process, there is always the possibility that she may have a brain metastasis. The fact remains, seemingly, that this new title is evidently an attempt to group new phases of post-influenzal infection, notwithstanding the influenza may have been present two or three months before the encephalitis developed; but, so far, it has not been definitely recognized as due, exclusively, to influenza. The probabilities are that, as time goes on, this will form a larger group than has been anticipated.

A year ago this disease appeared in France and in England, but did not attract very much attention, because it did not affect many people, nor was it looked upon as communicable. But, as is common with these disorders, it gradually spread until it reached this country. Undoubtedly, it embraces other conditions, which are allied to it, and is more or less suggestive of either an influenzal or some other type of infection. In some cases there are a good deal of cerebral excitement, difficulty of swallowing, and difficulty in enunciating, and there are, not infrequently, muscular tremors. It usually affects people over twenty years of age. Camp Lee reports that in October, 1918, they noted their first case, and the most conspicuous symptom with him and with others was double vision. The disease may run a mild course, and the patient make a satisfactory recovery; perhaps in some instances the remnant of a palsy remains. If the case is at all serious the mortality-rate is very high, from 50 to 75 per cent of the patients dying.

Because this disease has been referred to in the newspaper as "sleeping sickness," it ought to be differentiated from that; and yet the African reports that come to us show that not only human beings but animals have a similar lethargic state which they go through, and to which other symptoms are attached. It seems to be pretty generally accepted that it is a disease which occurs, and which involves the centers in the brain, and not so much the surface. Therein it differs from the traumatic meningeocephalitis, which occurs in the grey substance.

In New York City up to March 15, 40 cases were reported, of which 30 resulted in death. In Illinois up to March 11, 18 deaths had been reported to the state health department, out of a total of 27 cases, most of which were in Chicago. In the case reported above, three lumbar punctures were done, and at each puncture there was great cerebro-spinal pressure. Very soon after the last puncture the patient began gradually to improve, and now, after three weeks' treatment, is able to be up and about. The nystagmus has cleared away, and he has no difficulty in speaking or swallowing.

One of the other methods of treatment is rest and general care, general care as far as the eliminative organs are concerned and special care as to the time for rest. Rest to these patients means more than anything else, and they should remain undisturbed as much as possible. Very often physicians, as well as lay people, fail to understand that such cases exhibit the most extreme mental fatigue, and any effort to rouse them from their lethargy or stupor is harmful; consequently, the strictest adherence to the quiet, darkened room, and the least possible effort or demand upon the patient, should be the watchword of the physician and the family. Later we may know something more definitely about these patients, and perhaps something in regard to their treatment; but, as the encephalitic process is within the substance of the brain, it is much more difficult to reach it by surgical means or otherwise.

MISCELLANY

THE WORK OF THE VOLUNTEER MEDICAL CORPS AS PRESENTED AT THE LAST MEETING OF THE CENTRAL GOVERNING BOARD OF THE CORPS

Characterizing the work of the Volunteer Medical Service Corps and the Medical Section of the Council of National Defense as "a very striking demonstration of the American spirit," Dr. Edward P. Davis, president of the Corps, paid tribute to the patriotism of American civilian doctors at the final meeting of the Central Governing Board of the Corps held in Washington March fourteenth, prior to the termination of its war time activities April 1.

A report submitted at the meeting showed that nearly 70,000 applications have been received from physicians for membership in the Corps, of which 56,540 had been received and coded prior to the signing of the armistice, November 11, 1918. Qualifications of these civilian doctors, classified and coded on cards, will be placed in the Library of the Surgeon General of

the Army, where they will be accessible to all governmental departments for all time to come. With the approximately 40,000 medical officers additional, who are in the Army, Navy and Public Health Service, practically all the able-bodied, eligible doctors of the country will be listed, available for the nation's needs. Usually there are said to be about 150,000 physicians in the United States, but this total includes a large proportion of superannuated, disabled or ineligible.

Dr. Franklin Martin, Chairman of the General Medical Board of the Council of National Defense, expressed his warm appreciation of the co-operation he has received from the medical profession of the country and his firm belief in the value of the records of the Volunteer Medical Service Corps.

Dr. Davis said, in part: "This Volunteer Medical Service Corps and the work of the Medical Section of the Council of National Defense has been a very striking demonstration of the American spirit in more ways than we have imagined. I have always thought of a remark made by the President when the whole thing was in full swing, just about the time the nation had gotten its stride. He said that the men who were staying in this country were having the hardest time. That was true. You take the medical men who actually went into service. Of course, some of them did office work in Washington, but the men whom I know who have been in the camps here—whether they got to Europe or not—say they have had the time of their lives.

"One man, my assistant, said: 'I am just coming back from a year's freedom from responsibility, except for the immediate performance of my duties.' Another man, who is probably the best *x*-ray man in the Army, said his career in the Army has been the happiest time he has ever known, because he has worked scientifically without interruption. They had the privilege of being free to concentrate their minds on duty, and I think the remark made by Dr. Studdiford in New York the other night is to the point—that there has not been in the past year in the practice of medicine in the United States one single easy, pleasant, satisfactory thing. He said he hoped he would never have to live to go through another such year.

"When you consider the burden thrown upon the profession of this country by the shortage of resident membership, taking away assistants, nurses, laboratory men; the influenza epidemic, with the consequent increase in morbidity and mortality, and the strain upon the population which is now showing itself—it has been a most hectic war season. I don't think any profession has met a similar crisis in civilization as nobly as did the American profession, and no small part of the moral value and success of the profession was due to this Corps. The fact that we had a Corps where the men could record themselves who did not go to the front had an enormous moral value.

"I personally desire to testify to the pleasure it has been for me to do what I have done. And I have sincerely appreciated the honor which has been given to me."

To about 13,000 doctors whose applications for membership in the Volunteer Medical Service Corps had been received before the armistice was signed but which had not been acted upon by their state committees, now dissolved, Dr. Davis is sending the following letter:

From: Volunteer Medical Service Corps, Council of National Defense.

To: Applicants for membership.

1. With the cessation of hostilities subsequent to the signing of the armistice, the Council of National Defense, under which the Volunteer Medical Service Corps was organized, asked that the activities of that Corps be terminated, and Surgeon General Ireland of the Army requested that the valuable records of the Corps be given place in the Library of the Surgeon General where they will be maintained permanently for reference by the various Government bureaus.

2. Your application for membership in this Corps, we regret to say, was not acted upon by your State and County Committees before those Committees were automatically released and, therefore, we are unable to complete your membership by furnishing you with the visible evidences of your tender of service, viz., the insignia and certificate of the Corps. We wish you to know, however, that your patriotic offer of service to your Government has been received and your qualifications as outlined on the Volunteer Medical Service Corps application blank have been transferred to permanent code cards which are to be preserved as an important record of the war.

3. We also wish you to know that those of us who have had the responsibility of organizing and enrolling the medical profession of the country appreciate the value of your offer of service and thank you for it from the bottom of our hearts. This includes the Secretary of War, who presides over the Council of National Defense which authorized the Volunteer Medical Service Corps, the Secretaries of the Navy, the Interior, Agriculture, Commerce and Labor, the members of the Council, and the President of the United States who appointed the Council of National Defense and who definitely approved the Volunteer Medical Service Corps in the following words: "I am very happy to give my approval to the plans which you have submitted, both because of the usefulness of the Volunteer Medical Service Corps and also because it gives me an opportunity to express to you, and through you to the medical profession, my deep appreciation of the

splendid service which the whole profession has rendered to the Nation with great enthusiasm from the beginning of the present emergency."

4. Finally, may I express to you on behalf of the Central Governing Board of the Volunteer Medical Service Corps its personal thanks for your generous response to its request for an offer of your services at a time when it appeared they would be so urgently needed by the nation.

EDWARD P. DAVIS, M.D.,
President,
Volunteer Medical Service Corps.

BOOK NOTICES

A TEXT-BOOK OF PHYSIOLOGY: FOR MEDICAL STUDENTS AND PHYSICIANS. By William H. Howell, Ph.D., M.D., Professor of Physiology, Johns Hopkins University, Baltimore. Seventh Edition Thoroughly Revised. Octavo of 1,059 pages, 308 illustrations. Philadelphia and London: W. B. Saunders Company, 1918. Cloth, $5,00 net.

This is a well written volume, consisting of nine chapters and an appendix, is gotten up in good form and is well illustrated. It is a very useful and interesting book for both student and practitioner.

The chapters on the secretions of the ductless glands, calorimetry, and heat-regulation, nutrition, and heat-production are excellent, and contain all the known facts and theories regarding these subjects.

Dr. Howell has for years been one of the leading workers and investigators in the line of physiological research, and to him is due much credit for this latest and most up-to-date volume. —KING.

THE MEDICAL CLINICS OF NORTH AMERICA. Vol. 2, No. 2. (The U. S. Army Number, September, 1918.) Philadelphia and London; W. B. Saunders Company, 1918. Published bi-monthly. Price per year: Paper, $10.00; cloth, $14.00.

The contributions from the medical officers of the various camps consist of reports on (a) respiratory diseases; (b) cardiac conditions; (c) miscellaneous subjects.

1. Hamberger and Fox show charts of rise and fall of disease rates in epidemics of measles and pneumococcic and streptococcic infections at Camp Zachary Taylor. They consider that the pneumococcic and measles infections were, to a large extent, both influenced and complicated by superimposed streptococcal infections.

2. MacCallum, of Johns Hopkins, has examined a lung obtained at an autopsy during the Civil war, and preserved in alcohol for fifty-four years in the Army Medical Museum. He finds the pathology, as well as the clinical history, the same as that of the widespread and frequently fatal pneumonia due to streptococcus hemolyticus.

3. Majors Joslin and Gage, from Camp Devens, report post-operative pneumonias occurring after 2.1 per cent of operations, and conclude that pneumonia is due to inhalation of infectious material from the mouth when reflexes are absent under anesthesia and that it is a controllable disease.

4. Major Litchfield pleads for more careful physical examinations, coupled with Röntgen studies in acute infections of the thorax.

5. Miller and Lusk note that, in spite of early puncture and repeated *x*-rays, empyema was often overlooked at Camp Dodge until revealed in autopsy.

6. R. L. Cecil, at Camp Upton, found that empyema occurred in one-half the pneumonias due to hemolytic streptococcus, and advises early and repeated aspiration of pus, rather than early rib resection for drainage.

7. Major Williamson outlines the methods of preventing the spread of acute respiratory infections at Camp Greenleaf.

CARDIAC CONDITIONS

8. Goodman reports from the Cardiovascular Board at Camp Jackson, giving nine cardiac causes for absolute rejection from military service as follows: (1) aortic insufficiency; (2) mitral stenosis; (3) myocarditis; (4) arteriosclerosis; (5) cardiac dilatation; (6) aneurysm; (7) aortic syphilis; (8) arterial hypertension; (9) mitral insufficiency with hypertrophy, tachycardia, hypertension, and poor response to exercise.

9. Lieut. Kahn, from Camp Zachary Taylor, reports five cases of paroxysmal tachycardia with polygraph tracings.

10. Harlow Brooks, from Camp Upton, and Donald J. Frick, from Camp Beauregard, describe independently the syndrome of neurocirculatory myasthenia, and state that most cases improve under graduated exercise, but not to the extent of doing full military service.

11. Coleman and Horine conclude from examinations of over 15,000 men that diastolic or presystolic murmurs mean organic disease; and men with such murmurs do not stand army life, while systolic murmurs are, in general, of no serious import unless the myocardium is weakened.

12. Major Herrick reports twelve cases of pericarditis in Camp Jackson due to meningococcic infection, with antemortem diagnosis of four cases.

13. Peabody, Wearn and Tompkins have studied the basal metabolism of fifty-nine cases of "irritable heart of soldiers" at General Hospital No. 9, and found it to be normal, thus ruling out hyperthyroidism as a cause of this syndrome.

MISCELLANEOUS

14. Friedman and Vaughn report some success in preventing cross infection with streptococci in measles cases, and so preventing complications.

15. Major Charles Mix concludes from six cases of anthrax at Camp Mills that recovery is to be expected by excision of the malignant pustule, and early administration of anti-anthrax serum.

16. Major Scott reports very hopefully and very sensibly on the treatment of drug addiction at Camp Lee; and Lieut. Lerner from Camp Joseph E. Johnston shows photographs of unusual abnormalities encountered in the base hospital there from infantilism to traumatic aneurysm. —HANSEN.

NEWS ITEMS

MINNEAPOLIS CLINIC WEEK

Minneapolis Clinic Week, May 5 to 9, inclusive, will offer an opportunity for medical men to learn more about the medical and surgical problems presented in their daily work than can be learned in perhaps weeks of study, of text-books or journals.

The mornings will be given to clinics in the hospitals, and the afternoons to short papers followed by discussions. It is a discussion that clarafies and clinches impressions—that produces effect.

Read our editorial on Clinic Week, on another page.

Dr. J. C. Jackman has moved from Minot, N. D., to Decatur, Ill.

Dr. J. A. Lockwood has moved from Garden City, N. D., to Henry, S. D.

Dr. C. J. Maercklein has moved from Bowman, N. D., to Beach, in the same state.

Dr. H. L. Knight, of Minneapolis, has joined the staff of the Eitel Hospital as gastro-enterologist.

The new Red Cross convalescent hospital at Fort Snelling, Minn., was dedicated last month with interesting ceremonies.

Dr. C. T. Granger, of Rochester, has opened a branch office at Hammond, with Dr. George Asselin in charge of the same.

Dr. H. D. Burns, of Albert Lea, has resigned as health officer of that city, and the city health nurse has been dispensed with.

Is "sleeping sickness" to be a new fad? The newspaper diagnosticians have found a few cases here and there in the United States.

Dr. J. D. Fuller, of Plaza, N. D., has returned after some months spent in postgraduate work in the Chicago Postgraduate Hospital.

Dr. John C. Koch, of Blackduck, recently moved to Minneapolis, and has offices at the corner of Lake St. and Hennepin Ave.

The Washington County Medical Society last month gave Dr. W. R. Humphrey, of Stillwater, a complimentary dinner upon his return from the Army.

Dr. F. H. Spafford, of Flandreau, who has done exceedingly efficient work in the home service of the Medical Corps, has been mustered out of service.

The children of many public schools are following the rules of the modern health crusade with a vigor that means the complete success of the movement.

Lieut. Paul J. Preston, of Minneapolis, was one of sixty-six American medical officers recently decorated by the British war office for distinguished service.

Dr. John Sundwall, the new director of students' health at the University of Minnesota, is doing a work that might be made a model for many health directors even in villages.

Dr. Charles H. Cole, assistant superintendent of Sunnyrest Sanatorium at Crookston, has resigned, and has gone to New York city. Dr. Cole has been with the Sanatorium just a year.

Newspapers in all parts of Minnesota are giving extended notice of the new law authorizing the employment of county nurses, and many of the papers advocate such action.

Polk County is to have two visiting nurses. A public meeting, held at Crookston last month, to consider health matters, showed the people of that county alive to their best interests.

The baby clinics being held in all parts of Minnesota by Dr. E. J. Huenekens, of Minneapolis, and assistants, under the auspices of the State Board of Health, are doing great good.

Dr. W. G. Magee, of Watertown, S. D., has become a partner in the firm of Drs. Giere, Johnson & Koren, of that city, the new firm being Drs. Giere, Johnson, Koren & Magee.

Virginia held its first public health meeting last month. Dr. J. G. Saam, of Eveleth, spoke on how to promote public health, and Dr. Raihala, of Virginia, spoke on contagious diseases.

Dr. G. L. Rowntree, of the Medical School of the University of Minnesota, was a United States representative to the first interallied medical aeronautical congress, which met in Paris last month.

It is estimated that the toll of the recent epidemic of influenza in Minnesota was 7,300 deaths and over 125,000 cases of sickness. The deaths in the state in 1918 from tuberculosis were 2,408.

The women of Kenmare, N. D., are organizing a class in home nursing and hygiene, of which Dr. Critchfield of that city will be the instructor. This is an admirable plan to relieve a serious situation almost everywhere, namely, the dearth of nurses.

Dr. C. M. Oberg, of Minneapolis, is not dead, as reported in some medical journals last month. The mistake was due, no doubt, to the announcement of the death of Dr. C. E. Oberg, a Minneapolis dentist.

Salute a la militaire instead of hand-shaking; sneeze in the hall and not in the room; and like health-preserving suggestions are Minnesota contributions to the preservation of public and private health.

The staff of the City Hospital of Minneapolis has organized a clinical association of which Dr. A. E. Wilcox is president, Supt. H. C. Britton is vice-president, and Dr. John Hynes is secretary-treasurer.

The Drayton Auxiliary Hospital Association of Drayton, N. D., is doing splendid work for the hospital of that place. The association is a financial and social success, and is a great aid to the hospital.

Miss May O. McGregor, a nurse whose home is in Bemidji, is at home from France. She was cited twice for bravery in standing by her work in the face of great danger at Chateau Thierry and in the Argonne.

One hundred American medical offiicers arrived in London a couple of weeks ago for a term of post-graduate work in England. The physicians received a royal welcome from the British medical men.

The St. Paul City Council has passed an ordinance giving the City Health Officer power to compel persons suspected of venereal diseases to undergo an examination, and, if affected, to take medical treatment.

Dr. John Butler, of Minneapolis, has just returned from Camp Lewis, where he had charge of the urological work of the Camp. He resumes practice next week at his former offices in the Metropolitan Bank Building.

Dr. M. A. Vogtel, of Winthrop, has sold his practice to Dr. R. Hovde and George McGeary. Dr. Hovde is a recent graduate of the University. Dr. Vogtel has moved to Minneapolis, and has offices in the P. & S. building.

Gallatin County, Montana, in which the important city of Bozeman is situated, finds itself unable to employ a full-time county physician because of legal obstacles. Self-determination in matters medical does not belong to the people, it is in the hands of politicians.

Last month while two internes in the Minneapolis City Hospital were splitting hairs over which was on duty at a certain minute, an injured man lay suffering on the street waiting forty-five minutes for the City ambulance to reach him. This is worse than some codes of ethics.

A recent item in these columns to the effect that Dr. W. H. Moore had moved from Harvey, N. D., was erroneous. Dr. Moore has been a captain in the Medical Service, and since his discharge has been in charge of Dr. Clay's work at Bowdon, N. D. He will soon return to Harvey.

The late South Dakota legislature, while not hospitable to physicians, was unusually so to hospitals. The Insane Hospital at Yankton got $248,000 for improvements; the School for Feeble-Minded at Redfield got $161,500, and the State Tuberculosis Sanatorium at Custer got $145,700.

The Hennepin County Medical Society on March 10 invited the Minneapolis Dental Society to a joint meeting of the physicians and dentists of the city. Dr. E. C. Rosenow, of the Mayo Clinic, presented a paper on focal infection, and many memebers of the two societies joined in the discussion upon the paper.

The great world war brought some new words into use, and gave new meaning to old words unfamiliar to the public. For instance, *liason* officers are now familiar to the general reader, and since the close of hostilities we have learned that there are both *male* and *female* prostitutes, and that either kind may be *segregated* for the protection of the public. Why not by the *liason* officers?

The following Northwestern officers have recently been honorably discharged from the Medical Corps: Minnesota officers, Lieut. J. E. LeClerc, LeSueur; Lieut. Col. L. B. Baldwin and Capt. N. H. Scheldrup, Minneapolis; and Lieut. W. R. Humphrey, Stillwater. Montana officers, Capt. E. A. Gerhart, Billings; Lieut. V. O. Ungherini, Butte; Lieut. W. Hopkins, Gilford; Lieut. J. E. Stuart, Livingston; Lieut. W. B. Rogers, White Sulphur Springs. North Dakota officers, Lieut. T. L. Depuy, Jamestown; Lieut. J. W. Newlove, Minot. South Dakota officers, Lieut. O. E. Carlson, Hecla; Lieut. G. J. Long, Jr., Oldham.

OFFICE SPACE WANTED IN MINNEAPOLIS

A physician desires to sublease office, and share reception room with doctor or dentist in a down-town office building. Address 216, care of this office.

POSITION AS LABORATORY TECHNICIAN WANTED

By a young woman who has the bachelor's degree in chemistry and biology. For further information or interview, address 211, care of this office.

LOCATION WANTED

A physician of extended experience desires a good location in a city or a country town in Minnesota. A graduate of a high-grade Eastern medical school. Address 215, care of this office.

PHYSICIAN WANTED

In a new town, 55 miles northeast of St. Paul in Wisconsin, in a very thickly settled country. Nearest physicians 8 miles east and 12 miles west. For particulars address 225, care of this office.

POSITION AS LOCUM TENENS OR ASSISTANT WANTED

By an experienced physician (aged 39) who has recently returned from a postgraduate course in England. Has had special training in obstetrics and anesthetics. Address 214, care of this office.

SANATORIUM FOR SALE

The prettiest and best-paying sanatorium in the Northwest. Hitherto devoted to hydropathic treatment. Always full of patients. Best reason for selling. Located at Plymouth and Penn Aves. North, Minneapolis. Tel. Hyland 152.

LABORATORY TECHNICIAN DESIRES POSITION

Has had a college training in laboratory work, and experience in charge of the laboratory of a leading firm of physicians, whose work requires a wide range of laboratory determination. Address 224, care of this office.

PRACTICE FOR SALE

A general practice in a North Dakota town of 600 population, now paying $4,500. One competitor, and territory is 25x42 miles in extent, and demands two men. Norwegian-speaking doctor can increase business by 50 per cent. Reason for selling, going to city. Price, $500 for quick sale, including office contents. Address 222, care of this office.

A MONTANA VILLAGE WANTS A PHYSICIAN

Rudyard, Mont., a town of 300, seven years old, with a rich farming territory 35 miles south and 40 miles north, wants a physician. Town has two banks, two hotels, several stores, garage, livery stable, etc. Has electric lights. Is on the main line of the Great Northern. Farmers are thrifty Germans, Russians, and other nationalities. Further information will be given by E. A. Hawkins, pharmacist, Rudyard, Mont.

LOCATION WANTED

By an experienced medical man capable of doing röntgenographic and laboratory work. Address 210, care of this office.

PHYSICIAN WANTED

Wanted, a physician from an A + school, one that can do some surgery, to locate in an A1 town in North Dakota. One who has been in the Government service preferred, but want to hear from all. One physician in the town; also a small hospital, and nurse in attendance. Have a very large territory to cover. Address 213, care of this office.

POSITION IN PHYSICIAN'S OFFICE WANTED

Can do routine laboratory work, electrical therapy, and dressings, and am familiar with the use and administration of all vaccines; expert intravenous operator; can make myself valuable to any physician who uses intravenous treatment; have had several years' experience in physicians' offices. Best of references. Address 219, care of this office.

INSTRUMENTS FOR SALE

I will sell cheaply the instruments and books of my late husband. Among them are new sterilizers, atomizers, an almost new battery, blood-testing apparatus, and surgical instruments, and some almost new books. They can be seen at 1302 Linden avenue any evening or by appointment during the day, or a list of them will be sent upon application. Address Mrs. William Wakefield, 1302 Linden Ave., Minneapolis. Tel. Nic. 5449.

A FINE PRACTICE FOR SALE

Ill health compels me to retire. I offer my practice for sale at a very low price to a good man. I have a hospital of 13 beds in a handsome residence built by a man of wealth. Will rent hospital at low price. Can be used for hospital and residence purposes. Practice in a Minnesota college town of 4,000 population. Practice is paying nearly $8,000, and can be largely increased. Address 221, care of this office.

INSTRUMENTS FOR SALE

Owing to the death of my husband I have for sale a complete line of surgical and electrical instruments, as follows: an electrical sterilizer (almost new); a gas sterilizer; a fine Dr. Roger's blood-pressure apparatus; a Betz instrument cabinet, stand, and table; and a Campbell electrical cabinet, with attachments. All of these articles are in first-class condition, and will be sold cheaply. Address Mrs. W. E. Robinson, 510 Columbus St., Rapid City, S. D.

PRACTICE FOR SALE

Will sell my practice in a prosperous village of southern Minnesota very cheaply. It pays over $500 a month, and collections are excellent. Price of practice and office furniture (surgical chair, desk, book-case, chairs, rug, high-frequency and *x*-ray outfit, some drugs, etc.) $500, part cash ($150) and balance on secured paper. Will give possession at once. Modern house can be rented if taken soon. It would be an advantage if doctor speaks German. Address 218, care of this office.

PUBLISHER'S DEPARTMENT

ERGOAPIOL (SMITH)

In Ergoapiol (Smith) the manufacturers have endeavored to obtain a remedy with pronounced analgesic and sedative effect upon the reproductive system without the bad by-effects of the anodyne and narcotic drugs commonly prescribed.

Ergoapiol is recommended especially for disturbances in the reproductive system, such as amenorrhea, etc.

ANTIPHLOGISTINE

The manufacturers of Antiphlogistine report that its use is greater today than at any time since it was put upon the market. Physicians have learned that it produces marked results in many cases in which it was not formerly used, and that its continued application in many severe cases produces most gratifying results.

There is hardly a country in the world whose physicians are not acquainted with and do not use Antiphlogistine.

ORDERS FOR NEO-SALVARSAN AND LIKE DRUGS FILLED PROMPTLY

Dr. Edward J. Kimball, of Minneapolis, who for many years has been a distributer of high-grade medical books, and has become well known to medical men, has taken on new lines, and is selling Neo-arsaminol, Neo-arsphenamine, Neo-Salvarsan, etc. He furnishes these in all dosages and at New York prices.

He also represents the old and well-known house of A. S. Aloe Co., manufacturers of surgical instruments.

THE WALMAN OPTICAL COMPANY

The above-named company, located in the P. & S. Building, at the corner of Ninth and Nicollet, Minneapolis, do an exclusively wholesale business with physicians and opticians. They are manufacturers and importers of all kinds of optical instruments and merchandise, and give quick and accurate prescription service.

Their catalogue, with prescription blanks, will be sent upon application. They are highly honorable and competent, and wholly dependable.

THE WAUKESHA SPRINGS SANITARIUM

The beautiful and absolutely fireproof building of the Waukesha Sanitarium, with all the comforts of the modern family hotel, is no small part of the proper equipment for the housing and treatment of nervous patients; but this is not enough by any means. The personality and the scientific attainments of the director of the life lived in such quarters, alone make for speedy and lasting cure. This happy combination is found, in large degree, at the Waukesha Springs Sanitarium in its home and its director, Dr. Byron M. Caples, at Waukesha, Wis.

THE KENILWORTH SANITARIUM.

A well-known specialist in nervous and mental diseases, who had just visited the Kenilworth Sanitarium, said to the writer, "The interior arrangement of the building, which is handsome without, is ideal; my dream is to have some day such a home for my patients." And what more can be said for this model sanitarium except to add that its scientific management deserves and receives from all equal praise?

Dr. Sanger Brown, its founder and head, has made Kenilworth Sanitarium his professional monument and, to a large degree, his personal monument.

THE NATIONAL PATHOLOGICAL LABORATORIES

The National Pathological Laboratories have offices in Chicago, St. Louis, Brooklyn, and New York, and thus do a national business. Their announcement, which appears on another page, shows the character of the work they do and their charges for the same.

It cannot be too often reiterated that the public laboratory is indispensable in the successful practice of medicine, and will be until every physician has his own laboratory and is qualified to do his own work, which will never be.

If the reader does not know of the work of the high-grade laboratories, we strongly advise him to write one of the offices of the above-named laboratories.

PRIVATE MATERNITY HOME

Humanitarian laws have been passed in most states to regulate private maternity homes, and have done a world of good; but laws cannot reach and regulate the character of an unkind woman at the head of a maternity home, and therefore when a home with a superintendent of high personal character, gracious and efficient, can be found, physicians may safely send their patients to it.

Such a home and such a woman will be found in the private maternity home conducted by Mrs. Cora Morey at 2014 26th Avenue South, Minneapolis. Telephone, N. W., Main 6768.

THE ASBURY HOSPITAL OF MINNEAPOLIS

The superintendent of Asbury Hospital has accomplished what has often seemed an impossible task, namely, to maintain in the big hospital the home spirit of the small hospital, which is an atmosphere of cheerfulness, comfort, and helpfulness felt by each patient.

Asbury Hospital is not simply a Minneapolis institution, but is a Northwestern institution. Fortunate, indeed, is the patient who spends his hospital days under the care of the surgeons, physicians, attendants and the superintendent of Asbury Hospital of Minneapolis, which "ministers unto" every patient who enters its doors.

SHARPE & DOHME

We are pleased to have in our advertising columns such announcements as Messrs. Sharpe & Dohme make on another page. They offer physicians a wholly dependable preparation of F. E. Cascara Aromatica made by themselves, and also the U. S. P. preparation. They claim that because of the care taken in the selection and the aging of the cascara bark in their method of preparation, their product is far superior to the strictly U. S. P. product. Their challenge to physicians to test the two products and to learn by their own observation which is the better product, is well worth accepting. Cascara is too valuable a remedy and too widely used to permit an inferior product to bear the U. S. P. stamp.

Messrs. Sharpe & Dohme use the same careful methods in the preparation of all the principal drugs in the physician's armamentarium.

MELLEN'S FOOD

The greatest evil of an artificial food for infants is the tendency to constipation caused by such foods. In the manufacture of Mellen's Food this point has been recognized, and the elements tending in this direction have been eliminated so far as possible, and the digestive elements of the natural foods, such as mother's milk, have been introduced.

Mellen's Food is the artificial food most prescribed by careful pediatricians, and this fact is, naturally, the reward due the manufacturers for their careful observance of the scientific principles worked out in the laboratory of pediatricians.

HONORABLY DISCHARGED

Among others who have "done their bit" and been recently released from the service is Barbital (Abbott). The Abbott Laboratories was one of the first to receive license from the Federal Trade Commission to make Barbital (formerly known as Veronal); and shortly after they began producing it the Government requisitioned practically every ounce of their growing output. This, of course, left none for the medical profession, which had hailed the original announcement that Barbital was being made in America as one of the great chemical victories of the war. Now, however, the needs of the Government are nearly filled, and The Abbott Laboratories announce that they are ready to meet all trade requirements. They furnish a pure product, every lot of which is standardized by tests on animals. There is considerable cause for gratification in the fact that a firm so distinctively American as The Abbott Laboratories has shown its equality with the best that Germany could produce. It is up to us also to encourage and support the products of such unquestionably American houses that there will never again be danger of foreign domination of the American chemical industry. Barbital (Abbott) is supplied in tubes of ten 5-grain tablets, bottles of one hundred 5-grain tablets, and powder in one ounce bottles. Physicians desiring supplies will do well to take the matter up at once with their druggists, so that stock may be on hand when needed.

"K-Y" ANALGESIC

The relief of pain is a problem easily solvable by the doctor. But, as many problems are capable of more than one solution, so that of analgesia presents certain difficulties that deserve more than passing consideration.

The use of narcotics or depressants is apt to mask certain important symptoms, interfere with the cardiac, circulatory, and metabolic processes, and, in some instances, to expose the patient to the formation of a drug habit. On the other hand, physical therapeutic agents provide a means of securing local analgesia without any such disadvantages or dangers.

Heat, cold, and electricity are useful, and counter-irritation is effective and satisfactory in many instances. Pain is a sensation, a manifestation of irritation or stimulation of certain sensory nerves, usually referred or reflected from the point of origin to some more or less distant area. Counter-irritation applied to such an area acts to relieve, or greatly lessen, the sensation of pain.

The most effective and, at the same time, least irritating of counter-irritant agents comprise such drug agents as camphor, menthol and methyl-salicylate.

These, combined in "K-Y" Analgesic in a greaseless, bland base, secure effective action without the handicap of over-irritation, blistering, or the staining or soiling of the patient's skin or clothing. The depressing sequelæ oftentimes attending the exhibition of narcotics, sedatives, or depressants are thereby avoided.

This product is put up conveniently in collapsible tubes obtainable at drug stores.

SLOW CONVALESCENCE

The strong, virile, robust individual who emerges successfully from the attack of the pneumococcus, the bacillus influenzæ or the mixed infection of typhoid, is more than likely to recuperate rapidly from the depressing effects of the systemic disease from which he has suffered, and his convalescence will be prompt and uninterrupted. It is not so however, with the patient, whose vital resistance was at a comparatively low ebb before the disease invasion. In such cases, tardy convalescence is the rule, unless active measures are taken to revitalize the blood and thus restore and repair the essential solid elements—the red cells, and the oxygen-carrying hemoglobin. Pepto-Mangan (Gude) performs just this necessary service by furnishing the needed organically combined iron and manganese to build up the blood forming functions of the organism. It can also be depended upon to improve the appetite and act as a general tonic, and reconstructive, without deranging digestion or causing constipation.

THE
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ARE WE JUSTIFIED IN REMOVING A COMPARATIVELY HEALTHY GALL-BLADDER?*

BY W. H. MAGIE, M. D.
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This brief paper is based upon my personal experience in 300 operations upon the gall-bladder and bile-ducts.

There has been, and still is, quite an animated discussion going on as to the relative value of cholecystostomy and cholecystectomy. There is no doubt that each of these methods of securing the same result has its advantages in properly selected cases. While looking over the literature of surgery of the gall-bladder, one is impressed with the wide difference of opinion existing among different authors. There is no department of surgery in which there is a greater difference of opinion than in surgery of the gall-bladder.

My object in presenting this paper is to make a plea in favor of saving the gall-bladder, in, at least, a majority of the cases. The physiologists, as well as surgeons, are of the opinion that the gall-bladder has a function, and, when we admit it has a function, we are compelled to admit that such function, whatever it may be, should be conserved. It is claimed that its chief function is the storage of bile, and that the bile, while in the gall-bladder, undergoes certain chemical changes that better fit it to participate in the processes of digestion, and that this bile is discharged, at certain intervals, into the duodenum. These intervals correspond with the early stages of digestion. Again, there is another theory, more recently put forward, concerning an additional function of the gall-bladder, namely, that it acts as a pressure-gauge, keeping up the intra-biliary pressure. That the gall-bladder has a function of storing bile there can be no doubt. I have never seen an empty or collapsed gall-bladder when examining it during the course of operations in the upper abdomen. The fact that it is always filled with bile goes to prove that it has much to do with keeping up and regulating the pressure in the bile-ducts and liver. This theory is supported by the results of experiments upon animals. Eisendrath and others have shown that when the gall-bladder is removed in dogs the remaining cystic duct dilates, as do the common and hepatic ducts. The dilatation of the cystic ducts takes on the appearance of nature making an effort to reproduce the gall-bladder. This same dilatation of the cystic duct has been observed in man after cholecystectomy. This effort of Nature to reproduce the gall-bladder is evidence that the gall-bladder not only has the function of storing bile, but also has a pressure-regulation function upon the biliary system. These facts should be taken into consideration where the question of cholecystectomy *vs.* cholecystostomy is to be decided.

Some years ago, while discussing the relative merits of cholecystectomy and cholecystostomy with one of the most popular surgeons of this country, he made the statement that "every gall-bladder that can be saved should be saved; that removing the gall-bladder is like burning the

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bridges behind an advancing army; that it is valuable for drainage purposes, especially in cases of cholecystitis accompanied by choleangitis with swelling and plugging of the hepatic ducts, as well as the common and cystic ducts, with tarry bile."

Two years ago, while visiting this surgeon at his clinic, I saw him remove what looked to me very much like a normal gall-bladder. In reply to my question as to what percentage of gall-bladders he removed, he stated, "About 97 per cent." This answer was a very unexpected one, although I knew that his mind had greatly changed during the intervening years. The more we study statistics of gall-bladder surgery, the more confused we become, due to the fact that there is a wide difference in results even among the very best surgeons in our country, as well as among surgeons of the countries across the Atlantic. To account for this wide difference of opinion is impossible. How can we reconcile these widely divergent results? Probably as in the case of the surgeon who informs me that he had to re-operate in about one-third of his cases in which he had done cholecystostomies. He left many gall-bladders that should have been removed at the first operation.

The first object we wish to obtain in many of these cases is the saving of human life, for as many of these cases are very seriously ill when they reach the surgeon's hands. When to operate in many cases is a very important question, and the outcome will depend on a decision as to the most opportune time for operation. An inopportune time for operation may account for the great difference in the percentage of mortality reported by different surgeons.

One of the most remarkable things I have observed is the great recuperative power the gall-bladder possesses. In my early experience before we were removing as many gall-bladders as we do now, we were astonished to see a great majority of our patients with empyemic gall-bladders get well, and stay well, after drainage. If such results can be obtained from empyemic gall-bladders, we surely can expect a mildly diseased one to recover and become again a functioning organ.

It is generally conceded that cholecystectomy has much greater mortality than cholecystostomy. If so, then this consideration also should bear weight in making up our decision. Personally, I have had no mortality in my cholecystostomies, while, on the other hand, my mortality following cholecystectomy has been about the average mortality, if not greater than that of other surgeons.

Recognizing the fact that the gall-bladder is not a vital organ and that man seems to get along very well without it, it still may be true that our patient does not get along so well without it as if he had it still functionating. Owing to the great difficulty in following up our cases, this question is often a very hard one to decide. The facts are, that we have no means of knowing how much better off a patient might have been, if the gall-bladder had not been removed. Again, as to the morbidity following cholecystostomy, we also encounter a wide difference of opinion. One surgeon makes a statement that "fully one-third of his cases treated by cholecystostomy had to be re-operated on; others have put the percentage of re-operated cases as low as 5 per cent. In my own experience, my cholecystostomy cases have not required re-operating in more than 5 per cent, and in every case where re-operation was necessary, it was on account of overlooked stones or stricture of the cystic duct. In case of overlooked stones, the gall-bladder was simply re-opened, and stones removed and drained as before. In case of cystic duct obstruction, either an anastomosis with the duodenum was made or the gall-bladder removed.

I am of the opinion that long-continued drainage, followed by daily irrigation of the gall-bladder after the removal of drainage-tube, contributes greatly to the thorough and complete cure of the pathological condition. Irrigation is also desirable for the purpose of washing out any overlooked stones that may have been left. I have, on several occasions, washed out, or at least have had stones as large as a good-sized marble, present themselves at the gall-bladder sinus, when they were easily removed. That drainage also has a good effect in cases complicated with cholangitis, when the ducts are clogged with thick tarry bile, there can be no doubt.

What are the indications for cholecystostomy? In the writer's experience acute cholecystitis in all cases of only a few days duration; also acute cholecystitis in some cases where there have been previous attacks, provided the gall-bladder walls are not much thickened and are free from adhessions that indicate previous serious attacks, provided, also, that the cystic duct is open and the gall-bladder contains bile are such indications. Many acute gall-bladders contain but little bile at operation, due to swelling of the cystic duct, but within a day or two after drainage is estab-

lished and sufficient time has elapsed for the swelling to have been reduced, the bile escapes freely through the drainage-tube.

All cases of simple cholelithiasis, when the gall-bladder shows few signs of ever having been infected and when exploration of the interior shows a comparatively healthy mucous membrane, are cases for cholecystostomy.

When should cholecystectomy be resorted to? First, in all cases of hydrops with stricture of the cystic duct; second, in many cases of acute gangrene, or threatened gangrene, of the gall-bladder; third, in all cases complicated with imbedded stones in the cystic duct with ulceration produced by contact with the imbedded stone which, when healed, would probably cause stricture; fourthly, in all very thick walled gall-bladders due to fibrous or calcareous degeneration; fifthly, in all cases of ulceration due to pressure of large stones; sixthly, in cancer of the gall-bladder where the disease is limited to the gall-bladder.

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WHAT CONSTITUTES A GOOD RESULT IN GALL-BLADDER SURGERY?*

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It is not the purpose of this paper to quote statistics. My efforts will be confined to a discussion of the factors which tend to bring about a good result in gall-bladder disease and to point out some of the conditions that make for undesirable results.

The problem resembles somewhat that of a plumber who sets out to do a job that will be sanitarily perfect. His problem is simple because he is dealing with inanimate material. Plumbing of the liver is handicapped by certain physiological processes which have been pathologically changed so much that they no longer work smoothly. The pipes and connections have been so twisted and warped that their normal function is no longer possible. Devices must be made use of, as far as possible, to secure normal function through the intelligent use of inadequate machinery.

Long-continued disease of the biliary tract is apt to produce permanent changes. The mucous membrane often is destroyed over greater or lesser areas; and scar tissue, which distorts the previously smooth surface, takes its place. If the ulceration is in a duct the lumen becomes narrowed, as well as deformed; and this impedes the normally smooth biliary current. If the narrowing is considerable it requires increased pressure to keep the bile moving; and this constant, increased pressure finally results in dilatations and sacculations back of the narrowed segment. This leads to stagnation, which invites infection; and in this condition the tissues have subnormal powers to resist and overcome the infection. The infection is not confined to the gall-bladder and the larger ducts, but advances into the smaller ducts of the liver.

Infections of the gall-bladder almost always involve, not only the mucous membrane, but the submucous and muscular coats. This produces at first a general or localized thickening of the wall, due to round-celled infiltration and edema. Later, there is usually a thinning and fibrosis with loss of elasticity and contractile power. Now we have a lifeless sac possessing no power to expel its contents when before we had a live and functionating viscus.

The same process sometimes occurs in the common and hepatic ducts. With the elasticity and power of contraction gone, the bile flows through a tube, which might as well be made of papier mâché so far as its value in accelerating the current is concerned. If it were not for the accessory aids to the transportation of the bile to the duodenum, the results of the pathological changes described would be much more serious than they are. The rhythmical contraction of the diaphragm squeezing the gall-bladder and ducts between the liver and the intestines, and the additional help from the contraction of the abdominal muscles in respiration, continue the flow of bile which might otherwise cease entirely.

In order that the hepatic functions may go along normally, the delivery of the bile into the duodenum must be free and unimpeded. The most ideal conditions for the carrying out of nature's function are a smooth, adequate lumen of

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the hepatic and common ducts with normally elastic walls, a gall-bladder with healthy mucous membrane, and a normal wall capable of contracting regularly during the digestive process and free of adhesions; also an adequate cystic duct.

With these fundamental facts in mind when one approaches the question of dealing surgically with this delicate and intricate mechanism, one is stirred by a sense of grave responsibility. In the first work in this field the surgeon's chief aim was to save life. Surgery of the biliary tract has now reached a sufficient state of advancement that his aim is to save life in such a state of health that the future comfort of the patient is reasonably assured.

In a fairly large proportion of the patients operated on such a result is now obtained. The following, I believe, are the most frequent causes of lack of complete relief: (1) impediments, as the result of strictures, torsions, and lessened elasticity of the common or hepatic ducts to the free passage of the bile to the duodenum; (2) lack of elasticity and contractility of the gall-bladder wall, resulting in stagnation of the bile in that viscus and continuous infection and a tendency for re-infections; (3) adhesions of the gall-bladder to the pylorus, transverse colon, omentum, and liver; (4) stricture or kink of the cystic duct.

The avoidance of post-operative distress in all cases is more than one can reasonably expect. The amount of pathology present before the operation may be too great to permit complete restoration of function, but I believe care and skill will count a great deal in preventing or mitigating post-operative symptoms. The less pathology in the biliary tract previous to the operation the better chance the surgeon will have to restore completely the function of the tract. On the contrary, advanced pathology will often defeat his most skilled efforts. The truth of this statement adds emphasis to the plea that operations should be done before the pathology is so far advanced that restoration of normal function is doubtful.

In the earlier work on the gall-bladder and ducts post-operative pain, distress, and invalidism were so frequent that the thoughtful surgeon was led to review his methods and to try to find out wherein his technic had been at fault. That something was wrong we all realized. The brilliant results with complete relief of all the pre-operative symptoms were in too small a proportion to the many cases that were uncured, many of them with no mitigation of the old symptoms and some with new kinds of distress to torment them.

One of my first lessons was in cases in which operation was done for uncomplicated gall-stones with no adhesions. Some of these patients came back later complaining of attacks similar to those before the operation, usually not so intense, but more frequent and, as a rule, with the added statement that before the operation complete relief of the symptoms was experienced between the attacks, but now some pain and tenderness are almost constant. To put the case bluntly, I was not curing these patients; and to convince myself that any improvement had been made required a heroic use of the imagination. Something was obviously wrong with our methods. In some of these cases the abdomen was re-opened under the impression that more stones had formed. This was practically never found to be the case. What we did find was a mass of adhesions between the gall-bladder and the omentum, pylorus, duodenum, and transverse colon, with part or all of these structures adherent to the anterior abdominal wall. Obviously, it was necessary to revise the technic. The delicate peritoneum in this region must be treated with respect. More careful handling and less exposure resulted in some improvement in results.

When the now obsolete method of attaching the fundus of the gall-bladder to the parietal peritoneum was in vogue this seemed to offer a reasonable explanation for the formation of adhesions. When Dr. J. E. Summers, of Omaha, reported his method of using a purse-string suture around a rubber tube in the fundal opening in the gall-bladder and holding the peritoneal surface so closely about the tube as to make a water-tight joint, and abandoned suture of the gall-bladder to the peritoneum of the abdominal wall, I felt that the problem had been solved and that this would do away with adhesions. To a certain extent this was true. A distinct improvement was noted in the post-operative complaints, but the complaints did not vanish. There were still too many patients returning with adhesions. As someone has remarked, "post-operative adhesions to the gall-bladder embitter the lives of many patients"; and I wish to add that the surgeon and family physician of these patients do not have the sweetest time, either.

In spite of the greatest care and delicacy in handling the gall-bladder and other structures, with the use of pads wet in warm normal salt solu-

tion to protect them, the betterment in results was not enough to satisfy.

The question was often asked, why do adhesions sometimes cause such great distress and sometimes apparently none at all? It has been found that they occasionally produce a kink in the cystic or common duct; sometimes they cause a kink at the pylorus, which impedes the normal emptying of the stomach; and at times the great omentum is caused to pull on the greater curvature enough to render gastric peristalsis painful. All of these conditions are sometimes found, but they constitute only a small proportion of the symptom producing post-operative adhesions.

In my early work I had occasionally removed the gall-bladder because of the pathology which seemed too extensive to permit of a continuance of normal function. It was early noted that many of these cholecystectomies produced more complete relief than the less radical cholecystostomies. I have been gradually led to the conclusion that a large part of post-operative distress is due to gall-bladder adhesions, and that, if we could avoid these adhesions, post-operative distress would be greatly lessened. Efforts at more careful handling were redoubled, but with only slight improvement in results. The gentlest handling of the gall-bladder peritoneum seems often to produce dense adhesions.

The only effective way to avoid pericholecystic adhesions is to remove the gall-bladder; and, I believe, this is the most potent argument in favor of indiscriminate cholecystectomies. Surgeons have been compelled to resort to this measure because of the very unsatisfactory results following the more conservative operation. If any effective means could be found for preventing post-operative adhesions most of the gall-bladders now removed could be profitably retained.

Removal of an organ of as much consequence as the gall-bladder is not ideal surgery. Even though a small mimic gall-bladder forms after the real viscus has been removed, it cannot perform its functions as well as the parent organ. But for the present, at least, so frequent are post-operative symptoms because of gall-bladder adhesions that cholecystostomy should rarely be done.

Even if such an ideal good should be gained as a method to avoid post-operative adhesions of the gall-bladder, there will still remain a comparatively large percentage of gall-bladders that are intrinsically so crippled that they will have to be sacrificed. Normal elasticity, normal contractility, a healthy mucous membrane, and a normal duct are all necessary to insure normal and painless function. Lacking in any of these the viscus should be removed.

DISCUSSION ON THE TWO PRECEDING PAPERS

Dr. Clifford U. Collins (Peoria, Ill.): I can sympathize with Dr. Magie because three or four years ago I went through what he seems to be going through. When Dr. W. J. Mayo made the statement that he was removing 85 per cent of gall-bladders I was horrified. I felt that something must be wrong, and I was loath to believe it was myself, but I finally believed he was right. During a period of about a year and a half I wrote three papers on the subject, each one being a gradual evolution, and coming closer and closer to the removal of the gall-bladder. I was trying to convince myself all the time that he was wrong. I wanted to test this out, and so I got in touch with my patients. In 1915 I wrote to all the patients I had operated on for gall-bladder trouble, and I received responses from the majority of them. Twenty-five per cent of these patients were not cured: they were still complaining of digestive symptoms. They did not have gall-stones, but had a lot of digestive trouble. There were things they could not eat, and they were not well. I found out what Dr. Davis mentioned in his paper, namely, that nearly all of those patients on whom cholecystectomy had been done were well; they did not complain of anything. At that time I read an article by Swope, of Pittsburgh, in which he spoke of having sent a letter to a large number of patients, and from the replies he found that 27 per cent of them were not well. About that time I operated on a doctor and drained his gall-bladder. I received a letter a year afterwards, saying that he was perfectly well. Two weeks later he began to have trouble. He suffered for six months, and then Dr. C. H. Mayo removed his gall-bladder, and I know now the patient is perfectly well.

These things began to make me wonder, and I began to think perhaps the proper thing to do is to remove the gall-bladder in the great majority of cases. A few years ago I began to try to prevent adhesions by using the method of Dr. Andrews of interposing the colon between the gall-bladder and the stomach and putting omentum there, but I finally became convinced it was impossible to prevent adhesions of the gall-bladder if there was infection, and that drainage for ten to twenty days will not stop infection of the gall-bladder. It is almost a closed viscus, and a few days' drainage will not relieve infection. Since then that percentage of 25 has crept up to nearly 50 per cent. I drained the gall-bladder of a woman in 1906, twelve years ago, and she is suffering now with trouble from the gall-bladder, and I shall have to take it out.

In one case of so-called strawberry gall-bladder I resorted to drainage, and the man did not have any trouble for three years thereafter, but since then I have had to take the gall-bladder out, and I have now become convinced that cholecystectomy is the best thing to do.

Two or three years ago Dr. Willard Bartlett suggested a method of keeping in touch with patients after operations, and I have followed it since. I presume that a good deal of the discomfort from which these patients suffer for about six months after cholecystectomy is due to the gall-ducts adjusting themselves. After that time they settle down, and are well. When cholecystotomy

is performed, patients vary from six months to two or three years before having trouble, or reinfection takes place, and they are not well. I do not hesitate now to remove 90 per cent of the gall-bladders in patients that come to me.

Dr. Emil G. Beck (Chicago): We have heard two interesting papers this morning, the author of one advocating the removal of the gall-bladder, and the other asserting that it should not be removed, proving the statement that there still exists the greatest divergence of opinion. It seems to me, the surgeon should not be prejudiced against either method, and he should simply act in accordance with his best judgment when he sees the individual patient.

There are certain rules which the surgeon may adhere to. A gall-bladder which has been repeatedly infected and is chronically inflamed contains within its walls micro-organisms, and, when such a gall-bladder is drained, it is likely to keep the patient in poor health because of the existence of focal infection, the same as an abscessed tooth will do. We now pay much attention to diseased teeth, and we attribute to the teeth many ailments; and, if we remove the decayed or abscessed teeth, the patient usually improves. The removal of a diseased gall-bladder will usually benefit a patient who has been in poor health very markedly.

The different rules laid down in various discussions have been these: Acute gall-bladders should not be removed; they should be drained, especially after the first attack, because they are likely to return to a normal condition. But old adherent gall-bladders which have been repeatedly infected should be removed.

With reference to the prevention of adhesions: I saw Dr. C. H. Mayo employ a method which I think will prevent adhesions. When he removes the gall-bladder, he uses the omentum nearest to the gall-bladder as a sort of a buffer by sewing it around the base of the stump, and then introduces a rubber drain for a few days. In that way he prevents adhesions, which, I believe, as Dr. Davis has said, are the great source of trouble after operations in which the gall-bladder has not been removed.

Dr. Roland Hill (St. Louis, Mo.): The question of removal of the gall-bladder is one that is most vitally important. I felt like Dr. Collins when I saw Drs. W. J. and C. H. Mayo removing all gall-bladders, but with increased experience I have become more and more convinced that a gall-bladder once diseased is like an appendix that is diseased and had better be removed.

There is another factor to which I desire to call attention, namely, some of these cases, where the gall-bladder is not much thickened and where there are not many adhesions, give more actual distress than the cases in which stones are present.

I had one case recently that had been operated on by another surgeon, and nothing could be felt in the gall-bladder. The appendix was removed, but the patient did not recuperate. Three months later I had to operate on this patient (a nurse) for gall-bladder disturbance. I found some adhesions around the cystic duct, kinking it. Since then she has gained forty pounds, and is now absolutely well.

Two other cases I remember distinctly within the year. I had operated in such patients for gall-bladder conditions some years before, and found no trouble in the gall-bladder itself. The appendix was removed in each case. A few months ago I re-operated on both patients, and found small stones in each. At the time of the primary operation these patients evidently had a mild cholecystitis, which gradually became more aggravated as time passed, with stone-formation.

In the past year I have had case after case where the gall-bladder had been left by other men, and found that the only way we could get relief was to remove the gall-bladder. If the gall-bladder is removed early there is much less danger of infection and trouble in the ducts and the liver itself.

Dr. Willard Bartlett (St. Louis, Mo.): I think it was Professor Beyer, of Leipsic, who told the members of the Clinical Society in 1912, when we visited his clinic, that stones of gross size removed from the gall-bladder did not relieve the gall-bladder of all stones, because in the tiny crypts in the mucous membrane in such individuals there were always present stones of very small size. He urged that as a potent reason why gall-bladders containing stones should be considered suspicious, particularly those gall-bladders containing tiny stones; but the disease which originally caused them was still left behind.

I have been unable in my own mind to come to any conclusion, as the rest of you have, whether all gall-bladders should be removed or left in. Just what number should be left and what number should come out I do not know, notwithstanding all the arguments in favor of one side or the other; nor do I think any one else can determine this except at the operating-table. Furthermore, our views oftentimes are conflicting. We have been told to take out a gangrenous gall-bladder, which is correct; and we do not take it out when the patient is too sick, which is also correct. The views advanced on both sides, for and against the removal of the gall-bladder, are likely to conflict in a given case. Men of experience have developed surgical instinct in gall-bladder cases, as in other cases, and, without stopping to weigh every argument on the two sides, they proceed from that instinct on what turns out to be the best plan according to the individual case. That is about my own feeling in the matter, and I had not thought of it until sitting here and hearing these different arguments. I remember going around the hospital the other day, and explaining to a patient on whom a gall-bladder operation had been done the day before, that I had to leave the gall-bladder in because I did not know whether it should come out or not. I said, "You were too sick to take the gall-bladder out, and you may have a return of your trouble. If you do, you must come right back, and we will keep the charges down"; and so on. I find myself hedging on every patient whose gall-bladder I have left in because there is a reasonable chance that the patient is going to be displeased with the result.

Dr. Joseph Ransohoff (Cincinnati, Ohio): While one may hesitate as to whether or not the gall-bladder should be removed in a given case, at the same time, in the end, the surgeon may have to take it out anyway.

I think I was one of the first, if not the first, to do a gall-stone operation. The patient was a man, aged 76, profoundly jaundiced, and so septic that I would not touch such a case today. You know what the end-result was. The case was reported as a "gall-stone operation" at the time.

I am one of those who believe that it requires a great deal of courage in most instances to take out the gall-

bladder, provided you are sure you have taken out all the stones. If you are not sure of having removed all the stones, I suppose it is better to drain the gall-bladder. When the gall-bladder is infected, and you cannot feel the ducts are clear around, sometimes it is possible to get the finger in there and feel all around the common duct, and it is safer to leave such a gall-bladder, because the stones will come out.

Dr. A. J. Ochsner (Chicago, Ill.): I have at the present time two patients whose gall-bladders have been removed. I have had quite a number of these cases whose gall-bladders have been removed by the best of surgeons. You will all get them by the dozen very soon because everybody is removing gall-bladders. It seems that every Swede or Pole who has trouble after the removal of his gall-bladder goes to Augustana Hospital or St. Mary's. They are going there by the dozens after they have been supposed to be cured by the removal of their gall-bladders. They come back complaining of exactly the same symptoms they had before operation, only they are coming about three times as fast as the patients who have had their gall-stones removed and their gall-bladders left in.

Dr. Stanton followed a lot of our cases (I do not remember the exact number), and he found that many of the patients in whom we used a drainage-tube after the removal of the gall-stones had to be operated on again. He found that when we packed the gall-bladder with gauze and sutured it to the peritoneum and transversalis fascia the patient remained well; and that no sacculation, no ulcer formed as a result of the gauze drainage, and the patients did not require a secondary operation.

At our clinic we sometimes have three gall-bladder patients in one morning, and of that number I may remove the gall-bladder in one. Sometimes I may remove the gall-bladders in all three. If I am reasonably sure that there is something wrong about the cystic duct, or that the mucous lining of the gall-bladder will not recover as a result of tamponing with gauze, I take out the gall-bladder, so that, when there is a good reason or a good excuse for taking out the gall-bladder, I do it always. If I cannot find an excuse for removing the gall-bladder, after taking out the gall-stones, I always re-examine the case by passing my finger up from the common duct over the gall-bladder, and when there is not a good excuse for removing such a gall-bladder I leave it attached to the peritoneum and transversalis fascia, tampon it with gauze, and later pull out the gauze and let the case alone.

Since I quit using a drainage-tube in these cases, very few patients come back with trouble, but it was very different when we drained with tubes. I recall having seen within the present week three patients that came back in trouble after cholecystectomy performed by excellent surgeons.

Dr. A. E. Benjamin (Minneapolis, Minn.): I was glad to hear Dr. Ochsner say what he did. I have always believed that it is wrong to advocate the removal of gall-bladders in 95 per cent of the cases demanding operations. In removing the gall-bladder, if you can remove all the disease, well and good; but who knows but that the disease extends up to the hepatic ducts, as it often does? Stones reform, not in the gall-bladder entirely, but in these ducts. Therefore, in order to cure the patient, to attempt an analogous illustration by saying it is like a diseased appendix, and should be removed in all cases, is wrong. You can remove a diseased appendix, but you cannot remove the area in which the recurrent disease occurs by removing the gall-bladder; therefore we should have a loop-hole to crawl out of, and in case of further disease we should leave the gall-bladder in a great many cases.

I have not recently inquired of my patients after I have operated to see what percentage of them are cured by leaving the gall-bladder, but I do know this, not many have come back with symptoms demanding the removal of the gall-bladder. Where we can determine the gall-bladder is diseased, and it alone, it should be removed. If it is absolutely destroyed, and the mucous membrane is not functioning, and the bile is flowing freely into the duodenum, that gall-bladder should be removed; or, if it is gangrenous, not in the acute stage, being destroyed by stone-pressure, it should be taken out. It has been demonstrated that nature endeavors to restore the normal condition in the ducts, after the removal of the gall-bladder itself by the ducts enlarging. It is an indication that nature rebels against man's attempt to improve on her.

Dr. Magie spoke about irrigation of the gall-bladder, which is very good. I have had a number of patients that I have treated in that way. When I was not sure the ducts were clear, or were somewhat constricted, I resorted to hydraulic pressure, and that was helpful. In a man who had cholecystitis without gall-stones, in whom jaundice was very marked, with hydraulic pressure I succeeded in dilating the duct. He had become very much emaciated, but gained eighty pounds inside of six months.

Dr. E. S. Judd (Rochester, Minnesota): It would seem from Dr. Magie's paper that it is very important that we should compare the healthy gall-bladder with the diseased gall-bladder. There is no question but that our surgery should be based definitely on pathology. We all agree that if there is definite pathology, if the gall-bladder is diseased, it should be removed; but the point that comes up in gall-bladder surgery is whether or not there is anything wrong with the gall-bladder. It was formerly supposed that gall-bladder infections were largely due to infection of the bile, that the infection came through the portal circulation down through the bile, and that stones were formed from the infection. The more recent view is that the infection is carried through the blood-stream and, when it involves the gall-bladder tissue, it is a gall-bladder-tissue infection. If there is infection in the gall-bladder the gall-bladder should be removed. Removal of the healthy organ is contra-indicated, but, in all probability, there are many gall-bladders that do not appear to be infected when they really are. We undoubtedly have two separate conditions to deal with, one a cholecystitis with stones and the other a cholecystitis without stones. If the disease in the gall-bladder is to be cured that organ must be removed. If the infection is in the bile-stream drainage may remove the stones, and cure the case.

Dr. W. D. Haines (Cincinnati, Ohio): It is a difficult thing for me to go home, and discuss this subject in practice with my patients. I draw considerable inspiration from this Association every year, but it takes me two weeks after I return home before I can recon-

struct my ideas concerning what you have been gradually teaching me.

Formerly, I was an advocate of retaining the gall-bladder wherever it was possible to do so, but now I find every year I hedge a little more and a little more; and am cleaning up some of the mistakes I made in not removing the gall-bladder. Like my friend from St. Louis (Dr. Bartlett) I have been hedging, and telling my patients that they cannot get complete relief from gastro-intestinal symptoms by one operation. I tell them I have done what I could to the best of my ability, and with the little sense that the Lord has given me.

It seems to me, if we consider the subject in the proper light, we are probably operating in a great many cases for symptoms rather than for real disease, and our surgical work is based on our ideas of pathological conditions, focal infections, and so on. Suppose a man has sinus infection or infection in the apical canal, and is getting lesions of the heart, of the stomach, or of the gall-bladder, what should be done? If you drain one pocket you may not remove the cause of his trouble. He may have multiple abscesses about his body. You can drain a little abscess there and another here, and presently there will be another. By so doing you have not removed the underlying condition, and that is difficult to determine. So we are dealing simply with symptoms. You may tell a patient who is manifesting symptoms to get rid of some of the old bridges he is wearing in the mouth. You may tell him to get rid of a lot of decayed teeth, and after removing them the dentist may think he is going to relieve the patient of his symptoms, but he may not be able to do so, and the seat of the trouble may be elsewhere. Notwithstanding what has been said, I believe all of us are coming to the position that more and more we should remove these gall-bladders. The practice is more or less modern, and, as the doctor told us, he is getting his cases back the same as he got them back when he did cholecystostomy.

Dr. R. W. Corwin (Pueblo, Colo.): I would like to ask a question. Is there any way for us to tell while operating whether the gall-bladder should be removed or not? Is there some method by which that can be determined promptly?

Dr. M. L. Harris (Chicago, Ill.): If we are wise we will profit by the experience of others, but, naturally, we all get to the point where we depend very largely on our own experience to guide us. My mistakes in judgment have been in the lines of not removing the gall-bladder, so that I have had to do secondary operations a number of times to remove gall-bladders which I failed to remove at the first operation. I never have had to put back a gall-bladder that I had removed at the first operation. (Laughter.) So I am very much inclined to remove the gall-bladder if there is any doubt about it.

Dr. Magie (closing on his part): I came here to get my mind cleared up on this gall-bladder question: It seems to me it has become, instead, more muddled than before.

In answer to Dr. Corwin's question about telling whether the gall-bladder is diseased or not: I would urge that he examine it carefully before he removes it, and come to a conclusion whether it is diseased or not.

I also want to protest against removing a gall-bladder just because it is diseased. I do not think that is scientific surgery. We do not take a man's eye out when it becomes diseased. When a patient has a diseased kidney, we open it, take out the stone, and drain the abscesses; and the patient gets well. We know personally that the kidney has a function, and it is one that we can demonstrate several times daily. Unfortunately, we cannot observe the function of the gall-bladder so readily as we do that of the kidney.

Physiologists tell us that, at certain intervals during the early stages of digestion, bile is poured into the duodenum, and it is necessary for the bile to remain in the gall-bladder, where it undergoes certain chemical changes, which better fit it for the process of digestion. Corresponding to the early stages of digestion, it is discharged into the duodenum, where it has to do with the digestive processes.

When the gall-bladder is removed the common-duct sphincter is soon overcome by the increased pressure, then the bile flows steadily into the duodenum. The capacity of the liver to manufacture bile is limited; therefore there must be a time in the absence of a gall-bladder when there will be a deficient amount of bile discharged into the duodenum, and as a result imperfect digestion must follow. Consequently, it is fair to argue that digestion cannot be perfect in a person whose gall-bladder has been removed.

Dr. Harris made the remark that he had never been asked to put the gall-bladder back after he had removed it. That probably is true, but, if some of them could speak, they might make this request. Many of my patients have not given me a chance to put it back; they died. (Laughter.)

Dr. Davis (closing on his part): This is the most satisfactory discussion I have heard for a long time in that no two speakers have agreed (laughter), but, after listening to the different speakers, I find that I can agree with every one. When some one gets up and says it is a bad thing to remove the gall-bladder, I certainly and unhesitatingly agree with him; and when some one else says that, if you are going to get anything like relief of the symptoms, you must remove the gall-bladder, I agree with him. This whole discussion goes to show that at the present time the profession, as a profession, is absolutely at sea in regard to what to do in these cases. When I remove a gall-bladder I have the feeling that it is a confession of weakness on my part, that I am unable to cope with the condition, and I realize that I am not doing ideal surgery. It is not ideal surgery to remove an organ in this way; and I often think of the changes that have been made in certain other fields of surgery,—for instance, not very many years ago in time of war practically every gunshot wound of the extremities was followed by amputation. In the present war a good proportion of these extremities are saved, and we feel that a whole lot has been accomplished. I have the feeling that some day we are going to get on a like basis with reference to gall-bladder surgery and we will not have to take out these gall-bladders.

At the present time, as I stated in my paper, I get better symptomatic results by removing at least a good proportion of these gall-bladders. I used to limit my cholecystectomies to cases where I could see gross pathology in the gall-bladder or cystic duct, feeling that was the only thing to guide me, but I found a lot of the patients who, at the time of operation, seemed free from pathology, later came back when I had only drained the

gall-bladder. Perhaps I should not have said a large proportion of them, but many of them Many times, when I did not remove the gall-bladder, I felt like going around and apologizing to the patient, and preparing the way for him to come back and have another opertion done. That is the attitude we have been in right along. When we remove this organ we are doing something that is beyond us, and we are not able to combat the pathology, although this is a rather radical procedure.

In regard to Dr. Corwin's question of telling whether the gall-bladder is diseased, or whether there is something back of that, and so on: I do not think any of us can tell. We sort of hedge in these particular cases, and say, "This gall-bladder ought to come out." Sometimes we are right, and sometimes we are wrong. This has been so in my own experience.

Some years ago I remember having had two cases one morning that were exactly alike, both patients presenting the same line of symptoms, which were as classical as anything could be, and the gall-bladder in both cases did not seem very much diseased. In the first case I did not take out the gall-bladder. I left it and drained. In the second case I had a good chance for comparison, and said, "I will take this gall-bladder out," and I did so. In the particular instance in which I did not take out the gall-bladder the patient came back for the removal of the gall-bladder eighteen months afterward. In the patient from whom I removed the gall-bladder the symptoms were comparatively relieved. I believe we get better symptomatic results in a large number of these cases where we remove the gall-bladder than where we do not, and that is the reason I do it; operation is not ideal. This thing is not settled, and I believe the more we thresh it out, the more likely we are sometime to come to a better conclusion in regard to what to do.

PLACENTA PREVIA AND ABRUPTIO PLACENTÆ*

By M. J. Jensen, M. D.
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The types of hemorrhage to which a pregnant woman is liable are mainly three, two of which this paper is intended to deal with, somewhat briefly. The varieties of hemorrhages I refer to are known as placenta previa and accidental hemorrhage. Any of these is considered among the most fatal complications of pregnancy; and either variety, when severe or if improperly managed, even when slight, will endanger the woman's life and that of her baby. This is because a large percentage of the laity are ignorant of the dangers; and even physicians do not regard a slight flow of blood from the vagina during pregnancy as serious. Until lay people are educated to the fact that a slight bleeding from the vagina in a pregnant woman is dangerous, and until physicians regard it as abnormal and liable to jeopardize the woman's life, if not properly managed in time, we shall have a large percentage of deaths, some of which may be unavoidable with the best care, and a great number will be due to the neglect of physicians or failure on the part of the laity to summon medical help.

The real causes of accidental hemorrhage are not as yet well understood. The name is rather misleading as we seldom find that an accident caused it. Premature separation of a normally implanted placenta explains it better, but this term is not concise.

There are three general causes distinguishable: (a) nephritis and pregnancy toxemia with albuminuria, (b) diseases of the placenta and decidua, and (c) traumatism. We may assume that trauma acts only on a diseased organ, because the healthy uterus can tolerate most all the common insults and blows without apparent injury. Among diseased conditions chronic endometritis, often gonorrheal, plays the most important part. Syphilis, myometritis, and acute infectious diseases are found to be some of the causes. Even a slight trauma may, in the presence of one of the above-named causes, bring about a separation of the placenta; and a hemorrhage once started will continue to work its way between the layers of the decidua, and complete the separation.

There are two definite types of abruptio placentæ characterized by the presence or absence of external bleeding. At first the bleeding is always internal, but, as it continues, the blood works its way downward between the chorion and the uterus, and appears at the vulva. We must regard even a small show of blood externally as an evidence of much bleeding within the uterus. These two types are so intercurrent that they cannot always be distinguished. The symptoms of this condition are a sudden abdominal pain, usually steady, severe, and excruciating in a woman, generally in the last two or three months of pregnancy. The pain is often at the placental site, and is of a tearing character at first, while later it is dull and interrupted by colics. Another important sign is a change in the normal feel of the uterus, and combined with this is a change in the

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shape and size of the uterus, depending entirely on the amount of internal concealed hemorrhage.

The uterus is hard and boardlike, lacking the normal soft feel, if labor has not begun. If labor has begun, the normal alternate contraction and relaxation is absent. The severity of the symptoms depends on the amount of hemorrhage, and this usually depends on the degree of separation. Hemorrhage may be absent entirely, or only a very slight blood-stained serum may be seen externally. The fetal-heart sound shows marked alteration, and in some cases is inaudible, for the fetus seldom lives. Soon the symptoms of acute anemia supervene, and those of shock are added, due to a sudden distention of the uterus. Dizziness, faintness, shortness of breath, and precordial distress appear; the patient yawns or sighs frequently. She may complain of ringing in the ears, see spots before her eyes, and have great thirst. The pulse at first is only slightly elevated, and of small volume; and the blood-pressure may not be altered. Later the patient lies apathetic on the bed, or may faint. The pulse is never to be relied upon, as it is no sure index of what is going on in the circulatory system, and the moment any operative work is attempted it will fail.

Examination of the abdomen shows the uterus larger than corresponds to the given period of pregnancy; and on account of its boardlike consistence it is impossible to outline the fetus. Vaginal examination gives a normal lower uterine segment. If the bleeding is chiefly internal the prostration of the patient is out of proportion to the amount of blood seen externally. Labor usually comes on at once, and, if the contractions of the uterus are strong and dilatation of the os normal, labor terminates spontaneously, safely for the mother, but nearly always fatal for the infant.

The diagnosis is not very difficult if the condition is kept in mind. The acute abdominal pain, sudden in onset, usually at one side of the uterus, with sudden increase in the size of the uterus, the pallor, prostration and normal uterine segment, absence of fetal-heart sounds, with anemia and increasing shock—all point to one condition.

The differential diagnosis must reckon with placenta previa, rupture of the uterus, and extrauterine pregnancy. In placenta previa the quiet onset, no pain, and hemorrhage, always external at start, and the symptoms are proportionate to the blood lost externally. Rupture of the uterus is usually during labor, and the uterus is small at one side with a neighboring tumor, the fetus; there are no pains and no presenting part. Ectopic gestation is indicated by the history, the empty uterus with a tumor at one side.

The prognosis of this gravest obstetrical accident with which a physician has to deal depends entirely upon correct diagnosis and efficient and correct treatment being instituted at once. J. B. De Lee says that one-half of the women and 95 per cent of the babies will die in complete detachment with concealed hemorrhage, while a larger proportion will be saved with partial detachment and under skillful treatment. The treatment is to empty the uterus as quickly as possible, with due regard to the soft parts. If the patient is a primipara with a rigid cervix, a delivery by force is the worst treatment to follow, as it is liable to lead to fatal results.

A patient of this type should be treated by Cesarean section even if the baby is dead, as the best treatment is that which empties the uterus the quickest and with the least danger to the mother. If the cervix is only partly dilated, the bag of waters is to be ruptured, and a Vorhees bag inserted, filled with sterile water. Ergot and minute doses of pituitrin are given, and this will bring about full dilatation so that the uterus can be emptied. An abdominal binder known as the Spanish windlass for counter-compression, should be adjusted as tight as the patient can stand. After dilatation is complete, delivery should be completed as soon as possible. In all cases the accoucheur should be prepared for all kinds of operative delivery and for postpartum hemorrhage, for atony of the uterine muscles is a usual danger, and the woman is ill prepared for the loss of even a slight amount of blood. In my earlier experience I had a case of accidental hemorrhage. The patient came to the hospital about midnight with the history of having had a continuous cramp-like pain in the abdomen for a couple of hours. She was a primipara of about twenty-five years of age, and rather fleshy. She bled nearly a pint at one time as soon as she was taken to the delivery-room. The cervix was only slightly dilated, and the patient seemed to be much distressed and rather apathetic; otherwise her condition, pulse and color were good. I decided to wait a while for regular labor pains, and in about two hours from the time of my first examination the os was only two fingers dilated, and the uterus was hard and boardlike without the normal soft feel before labor or the regular contractions and relaxations when labor is on.

Under light chloroform anesthesia I completed

dilatation, and delivered by forceps a head presentation without trouble. The placenta was quickly removed, the uterus contracted, abdominal counter-compression applied, and, in spite of stimulation by strychnine, ergot, and hypodermoclysis, the patient died in a couple of hours after a dead child had been delivered without losing over two pints of blood externally. It is my opinion that had this patient been treated by abdominal Cesarean section as soon as it could have been decided upon, her life might have been saved and possibly that of her child. The one element which counts most of all is time. If you have made a diagnosis of separation of a normally implanted placenta a few minutes delay may alter your prognosis, and for that reason it is best to empty the uterus at once. I think if Cesarean section has a place in a case like the above, it should be done early. Very seldom is it necessary to perform a Porro operation to stop profuse postpartum bleeding.

De Normandie thinks Cesarean section should be done in most of the cases where the soft parts are not readily dilatable. G. M. Boyd says the question of Cesarean section deserves weighty consideration for the possibility of rupture of a Cesarean scar should always be borne in mind.

In the second type of severe hemorrhage, also known as the inevitable, because bleeding must take place before the os is dilated or the uterus can expel its contents, we have the placenta situated, in part or wholly, within the zone of dilatation of the uterus.

The placenta is ahead of the presenting part of the fetus and is found somewhere in the lower uterine segment. The text-books give us the complete or incomplete, and the latter can be divided into partial, marginal, or lateral. The causes of placenta previa are said to be ten times more frequent in the multipara, than in the primipara, and the central variety occurs on an average in about one-fifth of the cases. Some of the predisposing causes are chronic endometritis, multiparity, and subinvolution of the uterus. Placenta previa announces itself by bleeding without pain, which comes on without apparent cause. With these signs occurring in a woman pregnant more than three months who is bleeding without pain or discoverable cause for the hemorrhage, one should look for placenta previa at once. Hemorrhage is the first and most constant symptom occurring during the latter half of pregnancy. If there is no assignable cause we must expect the patient to have placenta previa unless it is proven not to be the case. If we examine the abdomen we find the uterus to have the normal feel, either of one in labor or not in labor. Labor usually comes on after the second or third hemorrhage. The fetal-heart sounds are heard or absent, depending upon the amount of blood lost. Almost without exception you will find a soft cervix, frequently patulous. By the examing finger a boggy feel is detected, which may cover the entire vault. You cannot feel the presenting part of the fetus. The fact that there is a bleeding, boggy mass in the lower uterine segment, and no pain or other cause for the hemorrhage can be found, should lead one to arrive at a correct diagnosis.

Before making any internal examination, everything must be prepared as for an operation, and great care should be exercised not to separate any part of the placenta, so as not to cause more bleeding. There are certain conditions to be differentiated having the peculiar boggy feel, such as a ferm coagulum, thick vernix caseosa, a monstrosity, and hemorrhage into the fetal membranes. Also, in case of a severe abruptio, the placenta may prolapse and lie over the os. The prognosis in placenta previa is usually bad. I should say that on an average of about 8 per cent of mothers die, and 60 per cent of infants are sacrificed. Statistics vary, but we have a right to assume that with a better understanding of the dangers involved for both mother and child more lives could be saved. One single hemorrhage may kill. Frequently a patient is moribund before any skillful management has been instituted. Many of the babies are born prematurely, and this, with the loss of blood before delivery, makes the prognosis for the child very bad. Most of the deaths in the mother are due to hemorrhage, sepis, rupture of the uterus, and air-embolism. The babies die from asphyxia, fetal hemorrhage, prematurity, and accouchement forcé. The treatment is best carried out in a well-equipped hospital. If the patient cannot be taken to the hospital thorough preparations must be carried out at home.

THE TREATMENT OF PLACENTA PREVIA

In this day with the discovery of modern scientific methods and hospital facilities, it is the duty of an obstetrician attending a case of placenta previa not only to save life wherever he can, but to check morbidity, as well.

There are certain factors which must be taken into consideration in deciding upon the method of treatment: the condition of the cervix, the

degree of previa, and whether the parents demand that not the slightest risk shall be added to the mother. There are experts who believe that a woman with placenta previa should not die except in rare instances, and they recommend that certain rational methods be followed in placenta previa, such as taking all these patients invariably to a hospital to terminate those cases that are in great danger as soon as the diagnosis is made; that the accoucheur should remain by the patient as soon as labor is begun, and he should be on constant lookout to save blood.

Many a woman has suffered from a long period of anemia caused by loss of blood. Septic infection and cervical laceration have been prolific factors in the cause of invalidism or death under the older methods of treatment of these cases. When a pregnant woman later in gestation bleeds apparently without cause, she is liable to have placenta previa. It is likely to be a partial or central one, for the marginal and lateral variety are not apt to bleed before the woman is in labor. The hemorrhage usually takes place a month or two before labor is expected

There are two routes through by which placenta previa may be treated. These are the old-established vaginal route, and the modern expedient known as Cesarean section by hysterotomy; the latter method is gaining prominence, and has proved satisfactory in the hands of some obstetricians.

The principle of treatment by the older methods consists in plugging or tamponing the lower uterine segment for the purpose of checking the bleeding. The strictest asepsis is demanded in every method. To the family physician, who first sees these cases, packing of the vagina at once suggests itself. This treatment, added to the danger of sepsis the germs being carried by the examiner's hand, greatly increases the risk to the patient, especially where more radical methods may become necessary.

Having decided the case to be one of placenta previa, we may proceed as follows: If the placenta is only partly covering the cervix and there is slight separation, we can rupture the membranes, and the head will descend, which is the best natural plug. If we cannot get the head, then we proceed to pull down a leg. Version is here the method of choice, and a very large percentage of cases are successfully treated by this method. The other old method of accouchement forcé is now strongly condemned by the best authorities. Vaginal Cesarean section is also abandoned in these cases except in a few selected ones before the seventh month where the cervix is rigid, and the child can be disregarded. Packing the vagina is not only inefficient, but adds a great deal more risk to the patient; and such a case would become a poor risk for Cesarean section should this become necessary. It has been found that septic infection is more frequent in cases where the tampon has been used.

It is the writer's opinion that in the future the tampon treatment will be abandoned in placenta previa, except in emergency cases, and then only until better treatment can be instituted. The most dangerous complications of placenta previa are hemorrhage, shock, and septic infection.

On account of the gravity of risk in this formidable accident I believe we should urge that in all cases of placenta previa with considerable hemorrhage the patient be taken to a hospital. In cases where the patient cannot be taken to a hospital for some reason, strict methods of asepsis and preparation as for any surgical operation must be carried out at the patient's home. We should abstain from vaginal examination, as far as possible, use rectal examination, and limit our treatment to rupturing the membranes, and stimulating the uterus to contraction, and thereby bring about spontaneous delivery, or bring down a leg to act as a tampon and check the hemorrhage. In most of the cases where the above treatment cannot be carried out, and on account of the high mortality in placenta previa treated by other methods, we have come to believe that abdominal Cesarean section must be considered where the mother and child are in good condition, and value is placed upon the fetal life. Where the hemorrhage is not controlled, and in young and uncomplicated cases and those that are complicated by eclampsia, it is the method of election. One objection to Cesarean section lies in the fact that the patient usually comes under the observation of the operator when profoundly anemic and infected by previous examination and careless use of tampons.

The mortality to the mothers in Cesarean section is about 3 per cent in elective cases by some authors. Others give statistics of 8 to 10 per cent. The Cesarean section scar, in the estimation of W. J. Rongy, has a mortality of 2 per cent. In any of these cases the mother must be a good operative risk, as Cesarean section can be looked upon only as a baby-saving proposition except in primipara with placenta previa, contracted pelvis, or a rigid cervix.

In summing up the recent conclusions, I wish

to emphasize the following: Placenta previa can be treated in two groups, namely, cases in which labor has not begun, and those in which labor has already started. The cases where the bleeding begins before labor, may be treated expectantly by absolute rest and sedatives, the indications for this treatment being largely in the interest of the child. If sedative treatment has been tried and hemorrhage recurs while labor is not yet started, and in case of a single profuse hemorrhage, active measures are indicated at once. In every case of placenta previa and accidental hemorrhage the strictest precautions for asepsis and as thorough preparations as for any surgical operation must be carried out. There are a certain number of these cases where Cesarean section should always be performed. They are as follows:

1. In primigravidæ and other cases with sufficient pelvic obstruction seriously to prolong labor.

2. In cases with a rigid and undilatable cervix where indications suggest a prolonged labor.

3. In most cases of placenta previa centralis and placenta previa complicated by eclampsia.

In accidental hemorrhage the method which empties the uterus the quickest possible without producing shock or injuring the soft parts, dilatation, version, and extraction, is the method. Cesarean sections should never be done as a routine measure unless the child is viable and the mother is a good surgical risk.

Finally, I wish to state that the above cases must be carefully considered. Wherever possible, we should limit our treatment to the more conservative methods. In those instances where it becomes necessary to decide upon radical measures, it should be left to the judgment of a well-trained obstetrician.

A WOMAN DOCTOR IN FRANCE

By Ida M. Alexander, M. D.
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Early in March of last year, a French liner, the Rochambeau, landed me, with thousands of other workers, in the quaint old town of Bordeaux.

The ocean voyage was an event, the weather being wonderful for February, and the personnel on board was such as to create an atmosphere of altruism. There were Y. M. C. A., Y. W. C. A., and Red Cross workers suffused with a zeal to live fully and unselfishly for others.

When they asked me what I was going to do in France, I usually answered, "Just such things as I do at home I suppose; I am a country doctor."

Judge my surprise then, when Dr. Knox of the Children's Bureau assigned me to dispensary work in the munition town of La Courneuve, while Dr. Manning, his assistant, assigned me to a tuberculosis clinic in Paris.

La Courneuve is a factory town of fifteen thousand souls, directly north of Paris. Like many small towns that grow up near a large city, it has no parks, no cinemas, no theaters—in fact, there are many places to work, but no place to play.

Our dispensary was located in a stone building centuries old; vertical iron bars set in solid masonry guarded the windows, and to make these sufficient safeguard we had to lock the wooden shutters outside this! Here a consultation-room and a reception-room had been fitted up as inexpensively as possible.

My assistants were eminently satisfactory. Nellie Reed, of Washington, D. C., had had many years of experience as a social service nurse, and Jean Duprat, the French nurse, had had a good general education followed by excellent hospital training. Though new to social service work, she proved very devoted to the people in her care.

We three, with occasional assistance, took care of from twenty-five to thirty-five patients during the day—women, children and babies. Though our domain was general medicine, we sometimes overstepped to the extent of pulling a child's tooth when it interfered with mastication. (This is not a joke). Pyorrhea was common among the women; in some cases there were no apparent bad results, but, as a rule, these ranged from an interference with digestion to a really severe rheumatic arthritis with high-grade anemia. Our teaching was concentrated on the children, however, and this was followed by the gift of a little booklet called "Pourquoi Soigner vos Dents," the most charming little booklet on the care of the teeth that I have ever seen. The children were so delighted with them that they sometimes forgot to say, "Merci, Madame."

Scabies! Did I ever read that the mite would not burrow where the integument was tough, as in the scalp? I learned to doubt it. Whole families would come to us badly infected, and yet where they all lived in one room, as many of them did, we learned to be thankful they had nothing worse than scabies. We also learned to appreciate how much the mother did do for her children in spite of her lack of house room. To this day, the most remarkable thing I saw in France was a mother and father and eight children who lived in a little kitchen and a tiny bedroom; and yet the children were clean, the house orderly and clean, and the mother's hair was curled and tidy.

The most pitiable cases were the tuberculars—and how numerous! Tuberculosis is the giant destroyer of France. Measles, the next in size, is a Hop O' my Thumb compared with this enemy of childhood and age. There is little knowledge of the means of preventing the spread of the disease, and that is why we have such cases as this: Marie brought in six-year-old Renee, because she was sick. One look at Marie's waxen pallor said "tuberculosis," and yet here she was taking care of this child while her mother was at work in the factory. Marie, in her turn, had taken the disease from a cousin who had lived with them the year before. Renee should go to a preventorium at once, of course, but, alas, there was no room in the preventorium until three months later. The Red Cross had sanatoria for those infected also, but admitted only the first-degree cases, and we found many that had to be left in the home exposing the children and older folk. Never did we feel so small as when we faced these tuberculosis problems, and never did we feel how desperate was the need for the means of spreading knowledge. At home we had newspapers, magazines, pamphlets, the public schools, the church, and the various health organizations to help us give instruction; here we had to depend on personal instruction, pamphlets, and the nurse. We felt that our efforts were but a very small "drop in the bucket."

There was a noticeably large number of our mothers who presented a married history like this: Two or more abortions, then two or more children dead in infancy from tuberculous meningitis, and finally one or more children who were living and well. I began to think that it was not the low birth-rate, but, rather the high death-rate that was a menace to France, especially after we discovered a family of twenty-three in Brittany.

Another cause of the high death-rate in France is a habit these mothers have of sending their babies to the country to be cared for at what we would call "baby farms." After seeing babies with eczema, rachitis, scorbutus, or tuberculosis come from such "farms," we were amazed at the nonchalence with which the mother sent her baby away. When we instructed them against this practice, we had all the traditions of the past against us. Only those who have been "over there" know how much that means. The Red Cross furnished us pamphlets on the care of babies, and they were given out to these mothers; but we knew that they had not learned to gather knowledge from the printed page, and the oral teaching was very important.

The direst lack of France during the war was butter and sugar. One pound a month was the allowance of sugar per person, while the price of butter—one to two dollars a pound—made its use well-nigh impossible to the laboring classes. But wine, though it had risen in proportion, was classed as a necessity, and was purchased anyway. All this had a very definite relation to the welfare of the child. The fashion for bare knees in children is almost universal, and this unnecessary form of heat-radiation at a time when the supply of heat-producers was scanty, plus the habit of giving wine, thus driving the blood to the surface of the body and further reducing the body-heat, formed a most vicious menace to the health of the growing child.

But, if the knees were bare, they clothed the chest warmly enough. There were eight to ten layers of clothing to come off before I could examine the lungs. If sweating the chest and freezing the knees are conducive to health, I would like the explanation. In the meanwhile, it was with great pleasure that I ordered long stockings for the children, though the boys wept at such feminization, and ordered less clothing over the chest.

With the lack of coal and high prices for all kinds of fuel, the closed window was the rule; but, aside from that, the French have a great fear of "une grande courante d'aire" and also of "night air." When our soldiers marched in Paris last fourth of July, the French greatly admired their stature, their bearing, and their "pep." "Well," explained one French woman, "that is because they sleep with their windows open." I wish we could have impressed on all of them the health value of fresh air. Even the tuberculosis hospitals need to learn this!

The bread allowance of a child under twelve

was only two hundred grammes a day; this was truly a hardship in this country, where bread is really the main article of diet. Not knowing food values they bought wine at three francs a bottle when they should have bought butter at ten francs a pound. "Why don't you get out a pamphlet on food values?" I asked desperately once. "Oh, but madame, they would not read it, or, if they did, they would not understand," was the answer. When they made a soup from cabbage and a lew lettuce leaves, and ate with this their allowance of bread, they considered themselves "fed," but I feel that they are undernourished even in peace times, and this in its turn depends on lack of knowledge.

So we felt that what we did and what we have taught were but a drop in that vast ocean of knowledge that is needed for the health of the nations.

I fear to trespass further on your space though I wanted to tell about how refugees are cared for at the station, and in Brittany where my work took me next, but it is too long a story.

In coming back home I bring with me the conviction that the doctor should not be paid by the patient, but by the community, and that his work should be 90 per cent educational, for only in that way can he prevent disease. "In France," said the wit, "you send for the priest first and then the doctor." Let us have doctors that come before they are "sent for."

I rejoice that we are forming county public health associations in Minnesota, and I am thrilled when I read of the stand we have taken on venereal diseases; I rejoice when I think that the saloon and liquor selling have at last been placed where they belong—with murderers, robbers, and thieves.

After a discussion aboard the "Lapland" on the hoary subject of prohibition, the Londoner concluded thus: "All joking aside, the country that crushes the liquor traffic is going to be the foremost nation on the earth." And that we are and will be, because we are fundamentally a nation of idealists who dare to carry out their ideals.

MISCELLANY

WORLD RED CROSS PLANS TRIUMPH OVER HUMAN ILLS AND DISEASE

"Peace on earth, good will to men," the ideal toward which civilization has been struggling through all the ages, will not seem so far off following the world-wide extension of Red Cross activities now being planned at Cannes, France, by representatives of the Red Cross organizations of France, England, Japan, Italy and the United States. Certainly no other body of men ever set out to shape a program that might be expected to bring about something at least approximating this ideal condition, for the supreme aim of this Red Cross committee is the reduction of disease and distress and the betterment of mankind everywhere.

Thirty days after peace shall have been declared by the momentous conference now reshaping the world's destinies at Versailles, delegates from the Red Cross organizations of the world will assemble at Geneva for the purpose of considering the program to be submitted by the committee now working at Cannes, France —a program the fulfillment of which should go a long way toward promoting that future harmony among the nations that the peace makers are hoping for. No denying the first requisite to contentment in an individual or a people is good health and as the promotion of good health the world over is the chief objective of the Red Cross plan the important relation of the latter to the future peace of the world at once becomes apparent.

THE
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MINNEAPOLIS CLINIC WEEK

No doubt many of our readers are asking themselves whether it will pay them to attend the second session of Minneapolis Clinic Week. To this question in their minds the editor of THE JOURNAL-LANCET can say, with great assurance, "Yes, it will pay every visitor richly."

This year's Clinic will be differentiated from that of last year, as well as from most, if not from all, meetings of medical societies or of clinics in general. It will be especially characterized by a systematic and comprehensive handling of the subjects of the four afternoon symposiums, on Tuesday, Wednesday, Thursday, and Friday. Each subject will be considered from the various angles of the specialists in such subject, as well as from the angle of the general practitioner.

We cannot at this time give a complete program of each symposium, but we can give the subjects, which are as follows: for Tuesday, "Influenza and Its Pneumonias"; for Wednesday, "Syphilis"; for Thursday, "Heart Affections"; for Friday, "Focal Infection." Among the subdivisions of these symposiums will be the new ideas in the early diagnosis and the early treatment of the diseases considered.

The surgical clinics will be given in the forenoons of the four days of the Clinic, and they will be so grouped as to hospitals that a visitor can readily pass from one clinic to another, thus losing very little time.

The banquet to be given by the Hennepin County Medical Society on Thursday (not Monday, as hitherto announced) night will be an interesting affair.

Visitors will do well to make early reservations at the hotels, for many of the leading ones are now frequently filled to overflowing; and without a reservation one may not be able to get a good room.

The headquarters will be at the Radisson.

THE MINNESOTA LEGISLATURE AND THE HEALTH APPROPRIATIONS

The men and women vitally interested in medical and sociological work in Minnesota were very much shocked to learn that the legislative committee on appropriations, particularly appropriations designated for the State Board of Health, had ruthlessly chopped off the $36,000 asked for to carry on the work of the Venereal Division of the State Board of Health. It seemed at first to be an outrageous and an almost unbelievable condition, that a body of men, such as the appropriations committee seems to be made up of, could not do such an unwise thing, particularly as Minnesota has been in the lead in this very important medical and sociological advancement, and in the face, too, of the offer of the federal government in Washington, through the Surgeon General's office, to add an additional $22,000 to Minnesota's appropriation.

When one considers what has been done by this Division in the past year, both from an educational and a therapeutic point of view, and also the fact that other states had begun to copy Minnesota plans of work against venereal disease, it seemed like a stupendous error. Fortunately, Dr. H. G. Irvine, of Minneapolis, a specialist in venereal diseases, went before the appropriations committee and explained the situation to them, and after they had heard his explanation they very promptly re-appropriated the $36,000 which they had formerly cut off.

Dr. Irvine went to California a year and a half ago to organize a venereal division of the Board of Health of that state. He did so, but was called back to Minnesota to take charge of such a division created by the Minnesota Board of Health, and he has made a brilliant success of it.

The old idea, an idea without much thinking involved in it still prevails, namely, that back of all this medical improvement and medical legislation, the doctors are trying to advance themselves financially. This is the most absurd reasoning that can be conceived. The suppression

of venereal diseases is a matter of public sociology, and it is for the benefit of the whole people, not merely for the infected man or woman. It is an effort to prevent the spread of venereal diseases from whatever source, and particularly to prevent the diseases which follow in their wake. It is well known among physicians that 75 per cent of the diseases peculiar to women are due to gonorrhea, and that a very large per cent of the diseases of the people is due to syphilis; therefore it would seem an economic problem in every way to repress and prevent the spread of all kinds of venereal diseases. A curtailment of such funds would be a poor economic and business proposition, particularly as it is a very small burden financially to the people at large. So far the relief of the infected, whether wilfully so or otherwise, and of the innocents who suffer from contact and infection, has been very marked.

Relief from the forest conflagration that devastated the northern part of the state a few months ago, was really of less importance than is the suppression of venereal diseases. That conflagration has cost the State a very large sum, probably ten times the amount asked for by the State Board of Health for the Venereal Disease Division. It is hoped that the work already begun by the State Board of Health to regulate the venereal problem will be carried on with unabating vigor.

DR. BRACKEN AND HIS ANTAGONISTS

In January, 1918, Governor Burnquist of Minnesota decided that there was too much personal conflict between the various boards doing health work in Minnesota, which includes the State Board of Health, the Advisory Board, and the Minnesota Public Health Association. In order to relieve the friction he did not re-appoint the presidents of either of the state boards. Following this, and in line with Governor Burnquist's desires, the three health boards got together and formed an alliance, which was presumably for harmonious work; and they agreed among themselves about what should be done, and have been working together, or, at least, had the same ends in view until Saturday last, when Dr. H. W. Hill, secretary of the Minnesota Public Health Association, came out in the press with a personal demand for Dr. Bracken's resignation, asserting that Dr. Bracken alone is responsible for the lack of appropriations for the State Board of Health. However absurd this statement may seem, it was published in all of the papers, and Dr. Hill has since attempted to bolster up the statement by all sorts of explanations and accusations, evidently seeking to embroil the legislature and the boards of health in a conflict, in which he evidently hoped that Dr. Bracken would be forced to resign.

The statement has been pretty generally circulated that Dr. Bracken is a somewhat difficult man to get along with, and that he is dictatorial, undiplomatic, and unpopular, all of which may be true; but it seems that at the present moment, when the appropriations were in the balance, as it were, that any such unauthorized statement from Dr. Hill is wholly unwarranted, because he knows perfectly well that Dr. Bracken's alleged unpopularity is due to the fact that he insists that the law under which he works shall be obeyed; that is, he compels physicians and health authorities to carry out both the letter and the spirit of the law, for which he is not responsible, and because he does this he has made himself unpopular. But it takes a mighty big man to withstand the stress and strain that Dr. Bracken has endured as Secretary of the State Board of Health for the past twenty-five years, and he very naturally makes enemies. If he did not he would be a very inefficient man in the place he occupies. No one for a moment doubts Dr. Bracken's honesty, his fearlessness of purpose, and his effort to do what is right, except Dr. Hill; and it seems from the newspaper reports as if Dr. Hill had gotten up this report and the demand for Dr. Bracken's resignation without consultation with his board of directors, and, further, that he has broken faith with his allies, thus complicating the situation, and, incidentally, reminding Governor Burnquist that it is not always easy to depend upon his co-workers. Even though he may appoint boards and have full confidence in men, there is apt to be an outcropping of friction, such as Dr. Hill has created.

If Dr. Bracken's lack of popularity cannot be traced by his traducers—and we assert it cannot—to another source than his enforcement of law, then Dr. Hill is in a pretty predicament. He is accusing the legislators of a great state of withholding appropriations for the maintenance of public health because they dislike a man who makes enemies by enforcing laws made by these same legislators. If there is another source of this lack of popularity, then let it be named specifically.

Dr. Hill is secretary of a board which has no legal or State backing. It is a board created purely by voluntary contributions, and receives

no aid from the State; and yet he does not hesitate to rupture the relations between other boards and sow seeds of discord, which are not only untimely, but ill-advised. Dr. Hill came here many years ago, and was employed as epidemiologist in the State Board of Health, where he made a very good impression. During the war he was back in Canada doing public health or war work, and at the time of Dr. Murphy's resignation from the Public Health Association was called back to Minnesota. Since then his efforts have seemed to be lagging, and this needless attack upon Dr. Bracken at this time will not increase the popularity of either Dr. Hill or of the board under whose auspices he is working.

A MEDICAL LEGISLATIVE ARGUMENT FROM OHIO

It is a matter of common knowledge, because it was printed in the newspapers, that for many years in Ohio, when the Christian Science bill was before the legislature, as it always was, the State Medical Association ran around in circles trying to kill the bill, and always succeeded. The result was that the legislature got an idea that it was the business of doctors to kill unwise medical legislation, and that the members of the legislature did not consider themselves at all responsible for unwise medical bills.

This year, much to their surprise, Dr. Upham, the Chairman of the Association's Legislative Committee, told the legislature that the State Medical Association was not going to oppose the passage of a very bad bill then before them in any way, but that before it was voted upon he wanted to tell them what it meant. He then proceeded to show them what it meant for the public health to have untrained men permitted to take care of the sick. Then he said, "Now, gentlemen, it is up to you. If you want untrained people taking care of the sick members of your family, and you want that kind of treatment in times of disease and epidemic, go ahead and pass the bill. It does not make a particle of difference to the doctors of Ohio whether you do or whether you do not. The responsibility is entirely up to you." Then he and his committe got up and walked out; and this surprising result followed: the members of the legislature, feeling that they were obliged to assume responsibility, defeated the bill by a vote of 88 to 33.

Minnesota medical men have practically done about the same thing, that is, they have not interfered with the passage of bills by the legislature. No fight was made this year against the chiropractors' bill, because the doctors are getting tired of assuming the responsibility in these matters. They do not care for themselves what kind of bills the legislature passes, but they do want it known that the legislature assumes all the responsibility.

This matter of granting a state license to the members of a cult or a profession, is so common that one feels humiliated by having to be tagged with a license, for it means no more than police regulation. Then license is in the same class with an automobile license or a dog license. Medical men are quite able to take care of themselves, and if the legislature is going to assume control of medical matters that are ill-advised and unwise, and not based on scientific principles, that is their matter and not ours. Perhaps it is just as well to let all of these cults come in, and to recognize all the different kinds that people enjoy for a time, particularly as they know that there is something new coming up at the next session. It is like the old quip, which says, "Never run after a woman or a street-car—there will be another one along in a minute." So there will be another legislature along pretty soon, and they will add more laws; some of them foolish, and some of them wise.

If the members of the legislature can get it into their heads that the doctors are not scheming to advance themselves, but are meeting among themselves to advance the practice of medicine from a scientific and from a laboratory point of view, perhaps all this tirade against "jealous" doctors will cease. Of course, the cults feel that a doctor is opposed to them on the ground that he may lose a patient, but the thing works both ways. Many people seek the services of the new fad in treatment, only either to choose another equally silly method of medical care or to go back to their doctor.

A CHINESE BASE HOSPITAL IN FRANCE

In a letter in "The Public Health Nurse," a magazine devoted to nursing, the issue of March contains a letter from Lille, France, and signed by W. W. Peter, Assistant, Division Bureau of Public Health Education. He says that the largest hospital in the world exclusively for Chinese is not in China, but in France. It serves 140,000 Chinese laborers. The staff is composed of 16 foreign doctors, 300 nurses are in attendance, and the chief of command is Colonel Grey, formerly of the British Legation, Peking;

and many of the other members are medical missionaries from China.

This hospital building is not a makeshift affair, but is constructed of iron, wood, and tarpaper. There are plenty of windows, and each building has a stove. All of them conform to one of the Chinese customs, and are one story in height. This remarkable hospital has most of the modern conveniences for the treatment of the sick,—medical and surgical buildings, or wards; and special buildings for tuberculosis, influenza, trachoma, and venereal, contagous, and emergency cases.

There is also a detached area, enclosed by double rows of high barbed-wire entanglements, with guards at the entrance. There are 60 patients in the building within this area; all of them are insane. Then, too, there is an isolated camp for lepers, of whom there are 16, presided over by Dr. Auld. Bacteriological and pathological laboratories are provided with all the necessary conveniences. An *x*-ray and sterilizing rooms are in the compound, and an incinerator is kept going night and day, burning refuse and garbage.

The Chinese here seem to enjoy themselves as much as they do in their own quarters at home, except perhaps that they have more comforts and conveniences for the convalescent. Of course, there are the usual gambling and quarreling, which may be found in many cantonments, but they are promptly corrected by the Chinese secretary, who evidently has a great deal of influence over the troublesome men.

It is quite likely that the Chinese may be kept in France for another year, as they arrived, for the most part, late in 1918. The writer wonders what the Chinese think of our Western civilization, and what outstanding impressions they will carry back to China. For the most part, of course, the Chinese are coolies, but they seem to have a simple philosophy and an abundance of common sense. The men who are higher up will certainly carry back to their home country quite a different idea of civilization outside of China.

The Chinese are provided with schools, and the Y. M. C. A. men are added to contribute to their comfort and entertainment.

PLAN TO AID CRIPPLES

The Russell Sage Foundation of New York has offered to aid in planning a survey of disabled persons in Minneapolis. It may arrange for a conference early this summer between Dr. Hastings Hart, director of its Child Helping Department, and Fred C. Winship, of Minneapolis. Dr. Hart is intimately acquainted with conditions in Minnesota, and Mr. Winship has had opportunity to study the problems of the handicapped while acting as secretary of the Associated Charities' Employment Bureau for such men.

The failure of the Minnesota legislature to pass the bill recommended by the State commission for the re-education of cripples and their placement in industry, and the neglect of the United States Employment Service to establish a division of the handicapped in Minnesota, are reasons urged for a census of the facts regarding the needs of industrial defectives, who, it is felt, are entitled to rehabilitation equally with fighting men disabled in the line of duty.

The United States Census Bureau cannot furnish the information needed to bring to light the facts required to induce this city and the State to make proper provision for cripples. According to the director of the Bureau, the census of 1920 will distinguish no class of defectives but the blind and the deaf. Moreover, it will take more than two years to tabulate the census data.

At present Minneapolis has no provision for the re-education of her cripples, of whom there are about 3,000, according to Mr. Winship.

Evidence of the practical good that might result from a survey is given by Miss Alpha Robbins, secretary of the Cleveland Association for the Crippled and Disabled, which has recently made a house-to-house canvass of this kind. Miss Robbins says the interest aroused has been of great benefit in obtaining better protection for the disabled. Constructive plans are being made for legislation and better educational facilities.

There are at present in Minneapolis 110 children of school age who are excused from attendance on doctors' certificates of unfitness. Nine of these are permanent cripples. Miss Bertha Van Hove, director of the attendance and vocational guidance department, Board of Education, believes that a survey will be necessary before the city will be in a position adequately to plan training for this group.

THE VALUE OF DISCUSSION

The Journal-Lancet has long believed that a wide-awake discussion on a good paper, or a group of papers, as in a symposium, is often quite as valuable as the paper itself or the group of papers. This opinion is shared by not a few distinguished writers, and yet most of the papers read before medical societies are published with-

out the discussion on such papers even when available.

In a recent symposium a distinguished surgeon said, in the course of the discussion, "The reason given by the reader of the first paper is not correct," and further discussion showed the criticism to be a correct one.

Discussion has its greatest value, perhaps, in clearing up obscurities of statement and in bringing out the views of many men, not only of the participants in the discussion, but of men quoted to uphold the views advanced in the discussion.

The papers in this issue of Dr. Wm. Magie, of Duluth, and Dr. Byron B. Davis, of Omaha, furnish an example of what discussion will do in the consideration of a familiar operation. Our readers will see on what dangerous ground a surgeon stands if he is positive that there is only one may to deal surgically with gall-bladders. We commend these excellent papers and the able discussion to our readers.

THE UNFIT

The misinformation concerning the number of men rejected for army service because of physical unfitness is well-nigh appalling when the figures are used to show the actual health conditions of the young men of America.

The official figures show that of three million or more men examined almost precisely 10 per cent of them were rejected. This percentage is, of course, larger than it should be, but it must be remembered that sometimes very slight defects caused rejection; and then, too, it is to be remembered that all men of certain ages were examined. In volunteer service many of this age-group would not apply for examination, and the percentage of rejections might be much less.

If this official information will cause some writers to be more careful in their inferences and statements, both oral and written, concerning the physical condition of our American youth, it will be well to fix it in one's memory, and then be able to use it on proper occasions, which are numerous enough.

FACETIOUS BUT SAD

In a pamphlet on "Efficiency in Medical Practice," which comes to us from a breezy far-western city, the writer gives his local habitation as the top floor of a handsome ten-story building, in which, it is stated, "tenants are limited to physicians, surgeons, and dentists."

This is perfectly correct so far, and we are glad to learn that so beautiful a building in the Coast city is devoted to the professions; but our gladness is ended with the last line of the legend giving the history of the building, and we give it in sadness:

Erected and owned by the economically organized laity—being paid for by the theoretically organized professions.

A CHEERFUL BIT OF OPTIMISM

With rare, if with any, exceptions, the reports of county nurses who have examined the children in the Minnesota public schools during the past three or four years, have had a sombre hue, especially in the percentage of imperfect children in all schools. Of course, the word "imperfect" is a very elastic designation of health conditions; yet it is possible to classify under this designation, not only the lame, the halt, and the blind, but the backward, the neurotic, the lazy, the truant, and all who are not perfect in the teacher's marks of scholarship, attendance, and deportment.

But here comes along a real cheerful, optimistic report from Granite Falls. The County Nurse, Miss Batho (we are glad the word is not in the plural) reports a "very satisfactory" health condition in the Falls' schools, and says that of 197 pupils examined last year the defects in 112 had been removed. That, surely, is encouraging; and we may yet hope that the race will survive, although it seemed a year or so ago, judging by the county nurses' reports, that we were headed for extinction.

All honor to the men and women back of the movement for better health conditions among school children; but let us pray the school nurses to send us an occasional word of cheer from the county and the village life of Minnesota, for all in the cities must perish if we cannot get it.

A STATE JOURNAL'S ESTIMATE OF THE JOURNAL-LANCET

Very near if not at the head of the state medical journals stands the *Journal of the Iowa State Medical Society,* edited by a surgeon of national reputation, Dr. D. S. Fairchild, who, writing this office concerning their new policy of exchanges, saw fit to add the following lines to his letter:

"I assure you that among the most welcome journals coming to our office is THE JOURNAL-LANCET, which we read with a great deal of care as being the best representative of Minnesota medicine."

CORRESPONDENCE

PUBLIC HEALTH MEASURES IN THE MONTANA LEGISLATURE

To the Editor:

I have just read your editorial "Doctors and Legislation," and "Minnesota Medical Bills," with much interest.

I feel that many times it is the medical men's fault for these measures not being defeated. There is always a lobby of Christian Scientists, osteopaths, and other workers, etc., on hand, but the doctors show very little interest in the legislature, as a general rule.

Have you noticed the good legislation put through in Montana this year? Here it is:

An act creating the office of epidemiologist at $4,200 a year;

A new State laboratory to cost $50,000;

A new State Board of Health, composed of five physicians recommended by the State Medical Association;

A bill for the compulsory reporting of venereal diseases;

A bill raising State Health Officer's salary from $3,000 to $5,000 a year; and a

$12,000 appropriation for use in preventing epidemics.

I mention the above somewhat to counteract the rough treatment such bills have met in other legislatures this winter.

Respectfully,

H. T. Rhoads, M. D.,
Member of the Montana State Legislature (House).

Choteau, Montana, April 5, 1919.

PARIS LETTER

March 3, 1919.

To the Editor:

I have just completed the translation of an 800-page text, "Obstetrique," by Le Pr. Fabre, 1914. He is a young man, holding a Commission in the French Army. He was formerly accoucheur des Hopitaux, Lyon, but at present he is working with Couvelaire in the Clinique Baudeloque, Paris. His aim, as he himself says, is to try to put precision into obstetrics. His book simply reeks with that idea. Handicapped as I am with no accurate knowledge of French, I must say that, in reading this one volume, I learned more than I ever have learned from any other book on the subject.

The book is logically divided and systematically arranged. The abundant illustrations are unmistakably labelled, and properly chosen for emphasis. In assimilating a French book on this subject one must remember the differences in both social customs and physical stature, as compared with those in America. This is important in interpreting medical ethics, and in modifying, slightly, pelvic and fetal measurements. To a beginner like myself who reads for information, the things which made the best impression were as follows:

1. Explanation of the structure of the placenta and subjects relating to this.
2. Summary of twins.
3. Control of hemorrhage.
4. Division of dystocias.

The material is all up-to-date without having a shadow of doubt cast on it by its presentation as a new discovery. Numerous other minor topics are handled in such a way that I am forced to admit that Germany's "peaceful penetration" is not the only work going on under our noses which we have failed to appreciate. I unqualifiedly recommend this book as worth the time spent in the "digging."

John Warren Bell.

NEWS ITEMS

Dr. H. M. Crandall has moved from Fairfax to Madison.

Dr. P. H. Munger has moved from St. Paul Park to Winthrop.

Dr. J. A. Regner, of Grantsburg, Wis., has moved to Lafayette (Minn.).

Dr. J. A. Marchessault, a pioneer physician of Ashland, Wis., died on March 30.

The Litchfield hospital is to be enlarged on account of largely increased patronage.

Dr. William Asbury Hall, of Minneapolis, is critically ill from a hemorrhage of the brain.

Dr. Helen Hughes-Hilscher, of Mankato, after twenty-three years of active practice, has retired.

Major J. C. Staley, of St. Paul, a member of Base Hospital No. 26, has been made a colonel.

The South Dakota State Medical Association will meet at Watertown on May 20, 21, and 22.

Dr. Harry G. Lundgren, of Ironwood, Mich., died last month at the age of 26. He was a graduate of the University of Michigan, Class of '18.

Dr. L. E. Claydon, of Red Wing, who has been visiting eastern clinics, has resumed practice.

Dr. G. A. Renz, of St. Paul, is seriously ill, and has been confined to his home for some weeks.

Dr. J. D. Lewis, of Minneapolis, has moved his office from the P. & S. Building to the LaSalle Building.

A second outbreak of influenza has occurred at a number of places, but the number of such places is small.

The City Hospital of Minneapolis graduated a class of twenty-six nurses from its training-school last week.

The Rood Hospital of Chisholm will take over the Webber Hospital because of Dr. Webber's removal to Proctor.

Dr. Lionel Anderson, formerly of St. Paul, with the British army in Belgium, died last month of pneumonia.

Minneapolis will publicly welcome the members of Base Hospital No. 26, which will soon reach home from France.

Dr. Gerhard Saevig, who has returned from army service, will not re-locate at Toronto, S. D., where he formerly practiced.

The contract for the erection of a building for the Tri-County Tuberculosis Sanatorium near Bayfield, Wis., will be let soon.

Lieut. R. O. Leavenworth, of Kimball, is at the University of Nancy, France, for special study in French surgical methods.

Dr. W. S. Chapman, of Mellette, S. D., has decided to move to Watertown, where he will be associated with Dr. H. J. Bartron.

Dr. J. H. Johnson, of Seattle, Wash., has joined the staff of the Mount Maurice Hospital and Sanitarium at Red Lodge, Mont.

Dr. J. R. Taylor, formerly on the staff of Dr. C. T. Granger, of Rochester, has located in Minneapolis with offices at 314 Syndicate Building.

The Rockefeller Foundation has given Johns Hopkins Hospital $400,000 for the endowment of a department of obstetrics at that institution.

Spooner voted, at a recent election, to issue bonds to the amount of $8,000 to build a city hospital. Only four votes were cast against the enterprise.

Minneapolis is said to have 3,000 crippled children. Plans are under way for a survey and re-education of these unfortunates this summer. The Russell Sage Foundation will help in the work.

Major C. C. Burlingame, formerly on the staff of the Fergus Falls State Hospital, has been decorated by the Polish Government for distinguished services.

Fifty physicians and internes of the Minneapolis City Hospital have formed a clinical society. At the meet of April 25th a scientific program will be given.

Captain George A. Stevens, of Sioux Falls, S. D., working in the laboratory of the great base hospital at Bordeaux, France, has been promoted to the rank of major.

The banquet of the Hennepin County Medical Society, to which all visitors to Clinic Week are invited, has been postponed from Monday evening to Thursday evening.

Graduate nurses of the Minnesota State Hospitals are to be put hereafter on a footing with the nurses graduated from public and private hospitals as to state registration.

Dr. H. L. Halverson, of Des Lacs, N. D., who has been doing special work at the Illinois Post-Graduate School in Chicago for the past three months, has resumed his practice.

Dr. J. C. Jackman has not moved from Minot, N. D., to Decatur, Ill. He is still in Brest, France, in war service, and will continue practice at Minot upon his return.

The North Dakota State Medical Association holds its annual meeting at Grand Forks on June 18 and 19. Several distinguished men from outside the state will read papers.

About 600 American soldiers (army and navy) lost, each, an arm, and 1,708 lost, each, a leg, in the world war. The number who lost two or more fingers, a hand, or a foot, was 726.

The firm of Drs. Lewis, Rebman & Grise, of Austin, has been joined by Dr. C. C. Allen, just returned from army service. The new firm will take the title of "The Austin Clinic."

Dr. Eduard Boeckmann, of St. Paul, celebrated his seventieth birthday on March 25. Dr. Boeckmann graduated from the University of Christiania, Norway, in 1882, and came to St. Paul in 1887.

Major (by recent promotion) Walter J. Marcley, of Minneapolis, has charge of the Tuberculosis Division, as chief physician, of the Red Cross work in Switzerland. He is located at Berne.

The mid-summer meeting of the Southern Minnesota Medical Association will be held at Rochester on June 30 and July 1, and, as usual, an excellent program covering two days will be given.

Dr. E. J. Huenekens, of Minneapolis, has taken Drs. Edward D. Anderson and Cecile Moriarty into association with him, and has removed from the P. & S. Building to the LaSalle Building.

Medical Officers of the World War is the name of a club formed at Superior, Wis., last month. Like clubs have been formed in various places. Dr. A. McEachern is the president of the Superior club.

Dr. L. G. Rowntree, Chief of the Department of Medicine of the Medical School of the State University, who was a lieutenant colonel in the Army, says the boys overseas are remarkably free from venereal diseases.

The Northern Division of the Red Cross announces that all war nurses returning to this section of the country will be trained to do public nursing and will be furnished work, provided such work is desired by them.

The Southwestern Tuberculosis Sanatorium at Worthington was re-opened last week. The institution cares for the tuberculous patients of eight counties. It had to be closed on account of trouble with the water supply.

The Scottish Rite Masons of Duluth have provided for baby clinics in that city during the entire year under the auspices of Dr. J. D. Budd, O. W. Rowe, and C. A. Scherer, assisted by professional nurses and volunteer women helpers.

Dr. Charles T. Granger, of Rochester, has added the following physicians to his staff: Dr. C. T. Sappington, who has been on the staff of the Johns Hopkins Hospital; Dr. O. Flores, of Chicago; and Dr. Irene Blanchard, of Rochester.

After a vigorous struggle the officials of Gallatin County and of the city of Bozeman, Mont., have agreed to employ a whole-time health officer. Why such struggles almost everywhere for the adoption, at small cost, of means to preserve health and life?

The Olmsted County Medical Society met in Rochester last month, and elected the following officers for the current year: President, Dr. A. F. Kilbourne, Rochester; vice-president, Dr. H. R. Russell, Stewartville; secretary-treasurer, Dr. Lee W. Pollock, Rochester.

Dr. W. L. Cowper, of St. Paul, who was an officer in the Medical Corps, being engaged in the transport service, died on March 9. Dr. Cowper was a graduate of the University of Minnesota, and was forty-four years of age. He had practiced at Michigan, N. D.

Dr. Steven Baxter has just returned from army service in France, and will be associated with Dr. J. Warren Little in surgical work at Hillcrest Hospital. Dr. Baxter was a major and saw service in the Vosges, at St. Mihiel, on the Meuse, and in Germany with the army of occupation. He was attached to a division of the regular army.

Minnesota has already received $22,500 from the Federal Government, which equals the amount appropriated by the State, in the campaign against venereal diseases. A like, or greater, amount could have been had for each of the next two years, had the State appropriation not been defeated. Folly is expensive.—Later: The appropriation may yet be passed.

Dr. W. H. Hill, Secretary of the Minnesota Public Health Association, charges, through the daily press, that the defeat of public health appropriations by the Minnesota legislature is due to opposition to the Executive Secretary of the State Board of Health, Dr. H. M. Bracken. Dr. Hill demands the resignation of Dr. Bracken in the interest of public health. An editorial on the subject appears on another page.

Dr. Richard Dewey, long physician in charge of the Milwaukee Sanitarium, has become medical director of the Sanitarium. Dr. Rock Sleyster succeeds Dr. Dewey as physician in charge. Dr. Sleyster has had years of experience in nervous and mental diseases, and has long been in service for the state of Wisconsin. Dr. W. T. Kradwell returns to the institution from army service, and becomes assistant superintendent.

The *Interstate Medical Journal,* published in St. Louis for over a quarter of a century, goes out of existence with its current (March) issue, and is to be succeeded by *Modern Medicine,* which will be under the same management, but it will be published from Chicago. It will have a larger field, and will be a journal of *modern* medicine, retaining the good features of the old journal and adding new ones. We bid it thrice welcome.

The Twin City papers report that a "great crowd" filled the galleries of the House of the Minnesota legislature when the bill for compulsory medical and dental examination of school

children was voted upon, and defeated. A "great crowd" also helped to defeat legislation for the compulsory examination and treatment of persons affected with venereal diseases. Could any of that crowd have had a personal interest in the defeat of the bill?

Dr. R. L. Murdy, of Aberdeen, S. D., heads a group of ten or twelve prominent South Dakota surgeons and physicians to be known as "The Aberdeen Clinic." Contracts have been let for a modern clinic building, which will cost, when finished and equipped, over $60,000. The building will be two stories high, and will be a model in every respect. The first floor will have five rooms for patients and a five-bed ward for minor cases. The second floor will have the offices, a waiting-room, a reception-room, the various rooms required by the individual surgeons, and a large operating-room for the use of all the staff.

LOCUM TENENS WANTED

For three or four months with view to assistantship or partnership. Must have diploma and be able to register in South Dakota. Large field and plenty of work for two doctors. Will need him by or before the first or the middle of May. Address Dr. E. N Wagar, Bijou Hills, South Dakota.

LABORATORY TECHNICIAN DESIRES POSITION

Has had a college training in laboratory work, and experience in charge of the laboratory of a leading firm of physicians, whose work requires a wide range of laboratory determination. Address 224, care of this office.

WANT AN ASSISTANTSHIP LEADING TO A PARTNERSHIP

By a married man, aged 32, graduate of Jefferson, Class of '10. Has done general practice with some surgery. Army experience with British expeditionary force. Best of references. Prefer a hospital town with a man doing some surgery. Address 231, care of this office.

PRACTICE FOR SALE

A $4,500 practice in a good town of 1,200 population in southeastern part of South Dakota. One of the best locations in the state. Practice can easily be increased. Price; $750 cash. Equipment will almost invoice that amount. Good fees, good roads, good schools, live business house, etc. Residence and auto optional. Two railroads. Am leaving state and going out of practice. Address 228, care of this office.

PHYSICIAN WANTED

In a new town, 55 miles northeast of St. Paul in Wisconsin, in a very thickly settled country. Nearest physicians 8 miles east and 12 miles west. For particulars address 225, care of this office.

SANATORIUM FOR SALE

The prettiest and best-paying sanatorium in the Northwest. Hitherto devoted to hydropathic treatment. Always full of patients. Best reason for selling. Located at Plymouth and Penn Aves. North, Minneapolis. Tel. Hyland 152.

PRACTICE FOR SALE

A general practice in a North Dakota town of 600 population, now paying $4,500. One competitor, and territory is 25x42 miles in extent, and demands two men. Norwegian-speaking doctor can increase business by 50 per cent. Reason for selling, going to city. Price, $500 for quick sale, including office contents. Address 222, care of this office.

INSTRUMENTS FOR SALE

I will sell cheaply the instruments and books of my late husband. Among them are new sterilizers, atomizers, an almost new battery, blood-testing apparatus, and surgical instruments, and some almost new books. They can be seen at 1302 Linden avenue any evening or by appointment during the day, or a list of them will be sent upon application. Address Mrs. William Wakefield, 1302 Linden Ave., Minneapolis. Tel. Nic. 5449.

POSITION IN PHYSICIAN'S OFFICE WANTED

Can do routine laboratory work, electrical therapy, and dressings, and am familiar with the use and administration of all vaccines; expert intravenous operator; can make myself valuable to any physician who uses intravenous treatment; have had several years' experience in physicians' offices. Best of references. Address 219, care of this office.

A MONTANA VILLAGE WANTS A PHYSICIAN

Rudyard, Mont., a town of 300, seven years old, with a rich farming territory 35 miles south and 40 miles north, wants a physician. Town has two banks, two hotels, several stores, garage, livery stable, etc. Has electric lights. Is on the main line of the Great Northern. Farmers are thrifty Germans, Russians, and other nationalities. Further information will be given by E. A. Hawkins, pharmacist, Rudyard, Mont.

POSITION AS LABORATORY TECHNICIAN WANTED

By a young woman with splendid educational background and eighteen months' experience in a large clinical laboratory; capable of doing complete urinalysis, blood counts, blood chemistries, sputa, gastrics, bacteriological examinations, frozen and parafin sections, and Wassermanns. Address 230, care of this office.

PUBLISHER'S DEPARTMENT

MOOR (MUD) BATHS

The Grand View Health Resort, of Waukesha, Wis., is the home of the Moor (Mud) baths, and its reputation for success in the treatment of a line of conditions recognized as amenable to such treatment, is constantly enhanced. The modern building, the golf course, and the tennis courts, in addition to the treatments, have brought to the institution marked success. For detailed information address the Waukesha Moor (Mud) Bath Co., Waukesha, Wis.

THE EITEL HOSPITAL

Every medical man coming to Minneapolis next month to attend the second annual session of Clinic Week, should visit the Eitel Hospital, where he will be met with a warm reception from the members of the staff, and the genial superintendent, Mrs. Eitel.

The Eitel Hospital has an atmosphere of its own, and it is worth while to breathe it, especially is it worth while to the man who now manages, or contemplates managing, a hospital.

Some interesting clinics will be seen at the hospital during Clinic Week.

CAMPHO-PHENIQUE

Campho-Phenique is recommended for use as a spray or for spreading on the surface of the mucous and other membrane when the condition calls for an antiseptic that destroys germs and aids nature in healing the inflamed membrane. It is an old and long-tried preparation that has stood the test of observant physicians who know how to estimate the value of the remedies they use.

Campho-Phenique is put up in both liquid and powder form, and in large and small bottles, in order to meet the needs of physicians.

HORMOTONE

The glandular products have a therapeutic value so well recognized in modern medicine that any of these products, if it comes from a house of high and unquestioned scientific standing, will attract wide attention from the medical profession.

A product of this character is Hormotone, manufactured by the G. W. Carnrick Co., one of the older manufacturing chemical houses of the country.

This pleuriglandular preparation is for menstrual and menopausal disorders, especially in the latter when associated with hypertension.

Hormotone literature will be sent to any physician by the G. W. Carnrick Co., New York City, upon request.

THE METROPOLITAN MILK CO.

The above-named company is the largest handler of milk in the Northwest, and that it has performed its work well in the City of Minneapolis, is evidenced by the fact that it has co-operated with the medical profession in their efforts to keep the supply in the best possible condition. As evidence of this the Company is the distributor of the only certified milk approved and recommended by the Hennepin County Medical Society. Its sterilized milk for the table is absolutely safe, and possesses the flavor and all the good qualities of raw milk, and none of the dangers of such milk.

THE C. V. MOSBY COMPANY

The Mosby Company, of St. Louis, Mo., has become one of the great medical book publishers of the country, and they publish a line of books of unusually high standing if the reviews of their new books in the medical press, or, indeed, the names of the authors of such books, can be taken as a criterion.

The Company makes monthly announcements in our columns of both their principal and their new books, and such announcements are well worth reading.

THE MINNESOTA SANITARIUM

The above-named institution is a private home-like sanitarium for the treatment of nervous and mild mental cases, and drug addictions. Its building is an attractive residence in an excellent residential part of Minneapolis. Its chief of staff is Dr. Leo M. Crafts, with Dr. Julius Johnson as associate. Both are men of high standing in the medical profession, and are men of ripe medical experience.

The sanitarium is open to the patients of all medical men, to be treated by the physicians of such patients or by the members of the staff, as the sending physicians may direct.

THE WINKLEY ARTIFICIAL LIMB CO.

For almost a third of a century we have known intimately of the managers of the above named company, and we have watched the growth of the business since it started. We gladly testify that no business within our knowledge has been conducted on a higher plane, and no higher degree of workmanship has been attained in any factory than has been exhibited by the Winkley Artificial Limb Company.

No lure of cut prices should induce any physician to send a patient to a manufacturer whose reputation for fair dealing and excellence of product is one whit below that of the Winkley Artificial Limb Company of Minneapolis.

AN AMERICAN CHEMIST GOES TO PARIS TO HELP THE GOVERNMENT

Mr. C. H. McDowell, Director of the Chemicals Division of the War Industries Board during the war, and President of the Armour Fertilizer Works for many years, has been chosen to act in an advisory capacity to Bernard Baruch on the American Commission negotiating peace in Paris. Mr. McDowell, who is en route to Paris where headquarters will be established, will work on the economic and after-the-war phases of the chemical and raw material problems. He is well known in chemical, agricultural, and business circles throughout the country, has had a vast experience in chemical lines, and will prove a valuable aid to the committee.

The work in Paris, Mr. McDowell said, would be with the raw material side of the chemical problems of reconstruction, including dyes, ferro-alloys, and potash and agricultural chemicals from a commercial and economic viewpoint. Mr. McDowell is going to Paris at the special request of Mr. Baruch, formerly chairman of the War Industries Board who is now in

Paris studying problems growing out of industrial reconstruction. He will be accompanied by Donald Riley, former Lieutenant Commander of the United States Navy, who had charge of the procurement of chemicals and explosives for the navy during the war. Mr. Riley is a son of Harrison B. Riley, President of the Chicago Title and Trust Company.

Mr. McDowell has been with Armour and Company for thirty-two years, starting as a secretary to Mr. Philip D. Armour.

THE MEDICAL PROTECTIVE COMPANY

The Medical Protective Company first gained the confidence of physicians by making its contract absolutely free from technicalities and loopholes by means of which it could get round defending its patrons.

Confidence in the Company grew when the profession discovered that it rarely lost a suit for any client and this was because of the ability of its lawyers, working with local attorneys, to defend innocent men against blackmail.

And it still grew in the estimate of the profession by its unformly fair treatment of the deluded plaintiff, the jurors, and the court.

It is an honorable Company, dealing fairly with all, and it is well-nigh uniformly successful.

THE McINTOSH BATTERY & OPTICAL CO.

The McIntosh Company is an old-established house with confidence in the excellence of what they manufacture and sell. They maintain that one piece of good and efficient apparatus in a physician's office leads to far better results than a dozen or a score of pieces of secondary value, which too often accompany low prices, or they may be inefficient because they are not handled efficiently by their possessor who is attempting too much as a beginner.

Success in electro-therapy is most surely attained by beginning slowly with good apparatus; and this course is most easily followed by dealing with a high-grade house like the McIntosh Company, of Chicago, and following their advice.

SHARP & SMITH, CHICAGO

Every instrument manufactured or imported by the old reliable house of Sharp & Smith has a guarantee of excellence in manufacture that never fails, and every such instrument will also possess all of the qualities it is represented to possess. Such guaranties should go, as far as possible, with every surgical instrument or appliance purchased for use in the sick-room or in a surgical operation. Anything short of this should be intolerable to every medical man.

When a house has such a reputation, any new instrument or appliance may be safely purchased solely upon the representations made by the house.

Sharp & Smith deal only in high-grade surgical instruments and hospital supplies, and they sell them at right prices.

MICAJAH WAFERS

There is an old saying to the effect that "good wine needs no bush." The same may be applied to those medicinal products which have been used by the medical profession for a sufficient length of time to prove their value and demonstrate their efficiency. Micajah's Wafers may be taken as an example of this. For over 30 years this product has been before the medical profession, and its use has constantly increased. While no claim has been made as to its curative power in the classes of conditions in which it is indicated, it will, as can be easily proven, serve a most useful purpose as an adjuvant to the other indicated treatment. The Micajah's Wafers are advertised only to the medical profession, and samples, interesting literature and case reports will be sent to any physician on request to Micajah & Co., Warren, Pa.

WINNING ON THEIR MERIT

There was a time when the efficacy of plant proteins, in the form of intramuscular injections, was regarded with considerable skepticism, especially by physicians who had been fairly successful in the use of animal and bacterial serums, antitoxins, mercurial solutions and similar forms of treatment, but the excellent results that are being obtained through the use of Proteogens (formula of Dr. A. S. Horovitz) made by the Merrell Laboratories, have produced a marked change of opinion among the progressive element of the medical profession. Many of those who were outspoken doubters are now enthusiastic in their praise of Proteogens and are using them extensively in the chronic ailments which usually baffle the regular methods of treatment. All "new things" in medicine are not good, but Proteogens are certainly winning high favor among the doctors.

THE NEGLECTED THERAPY OF CONVALESCENCE

The physician who keeps in touch with the progress of medicine generally, is well informed as to the treatment of most of the "thousand and one" ills that he is called upon to combat. The diagnosis and treatment of acute conditions, as well as the successful management of the more chronic affections, are subjects which he is constantly investigating and studying. It so happens, however, that after the dangerous shoals of medical navigation have been successfully negotiated and when the crisis or danger point has been passed, the physician is all too liable to relax his vigilance and to allow the patient to convalesce without sufficient attention to the therapeutic details of this important period. While the feeding of the convalescent is of great importance, the medico-tonic treatment is equally essential, in order to improve the appetite, tone the digestive, assimilative and eliminative functions generally and to hasten the time when the patient shall be once more "upon his feet." Among all of the general reconstituent and supportive measures in the therapy of convalescence, none is more essential than the reconstruction of a blood stream of vital integrity and sufficiency. Pepto-Mangan (Gude) is distinctly valuable in this special field, as it furnishes to the more or less devitalized blood the necessary materials (iron and manganese) in such form as to assure their prompt absorption and appropriation. One especial advantage of administering these hematinics in this form, is that digestive disturbance is avoided and constipation is not induced.

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RADIUM IN THE TREATMENT OF UTERINE FIBROIDS*

BY J. WARREN LITTLE, M.D., F.A.C.S.
MINNEAPOLIS

I have to present for your consideration this evening a report on seventy-seven uterine fibroids coming under my care at Hillcrest Hospital, Minneapolis, during the past two years. Sixty of this number were treated by radium, and seventeen were operated on with no deaths in the series.

Radium was discovered in the year 1898, and soon after this date began to be employed in various ways in the treatment of disease. There has been, however, no standardization of methods for its employment, and its present-day workers can appropriately be called pioneers.

Upon visiting different clinics one will find the workers employing different screens, most of them original and many ingenious. Their ideas as to the amount of radium to be used and the length of time of its application are apparently based upon their individual experiences.

One begins the use of radium with a feeling of uncertainty, having no guide upon which he can surely rely. The most important thing for a beginner to be thoroughly impressed with is, that he is dealing with a very powerful agent and that it is much better to use too little rather than too much.

It is difficult to make one's self fully realize that it is unsafe or in any way dangerous to pick up radium with one's fingers, as it is contained in a small unoffending-looking metal tube with no sensation of heat and is, apparently, as dead as the proverbial door-nail; but one contact of several minutes duration, or several contacts of shorter duration, will produce numbness and loss of sensation in the ends of the fingers so exposed; the skin will crack and bleed; and permanent injury may be done, the radium acting much as the *x*-ray produces a burn.

The field for the application of radium to disease is large and varied, but its application is most often thought of in the treatment of cancer. So fixed is this impression in the minds of many that, if you suggest the radium treatment for any other disease for which it may be suitable, the patient at once fears he has cancer, not having heard of radium being used for anything else.

Excessive flowing at the climacteric and hemorrhage from fibroids of the uterus are quickly and effectively stopped by the introduction of from fifty to one hundred milligrams of radium in tubes placed in an ordinary rubber catheter and inserted into the uterus, allowing it to remain from two or three to twenty-four hours, depending upon the case and the result desired.

The time when it can best be used in the uterus is near the menopause, which corresponds also to the time most fibroids come to operation.

Sterilization will no doubt result in young women as the effect of the intra-uterine use of one hundred milligrams of radium for twenty-four hours; indeed, a smaller amount for a shorter time may accomplish it. Radiation of the ovaries in the young should, therefore, be avoided, but, if a hysterectomy, with removal of

*Presented before the Hennepin County Medical Society, April 7, 1919.

the ovaries, must be done, as is sometimes the case, the result is still favorable to radium, the patient having avoided a painful and dangerous operation with a period in the hospital for at least two weeks and a convalescence of as many more at home.

In the use of radium a little gas may be required for its introduction. The patient remains in the hospital one or two days, and walks out, going about her usual duties. With many patients one application is sufficient, but some require two treatments.

A dirty and sometimes pinkish discharge is likely to last a few weeks, but it is not offensive, and it can be comfortably controlled with one or two zinc douches a day. The tumor does not disappear quickly, but gradually, steadily diminishes in size. If a fibroid is so large as to produce pressure symptoms it should be removed, as it should be if it is suspected of undergoing malignant degeneration.

In small uteri with general fibrosis where nothing but removal will stop the hemorrhage, radium acts almost as by magic, bringing about complete cessation of menstruation, corresponding to that of the menopause, some being very mild, others quite stormy.

The danger of radium treatment in fibromyoma is practically nil. I have never heard of a death. Of course, the same care must be exercised in the introduction of radium as used in vaginal or abdominal operations. Among the dangers in operative treatment of fibroids of the uterus is brown atrophy of the heart muscle. Thrombosis and pulmonary embolism are of much more frequent occurrence than in operations done for pelvic inflammation.

Quoting Howard Kelly: "In both skilled and unskilled hands there is the ever-present dread of cardiac embolism often occurring about the time the patient is superintending the packing of her grip, happy in the anticipation of the home welcome—truly a tragic ending. With skill or without it, in lesser or in greater degree, hysterectomy is followed, in a considerable number of cases, by a protracted convalescence and untoward sequelæ in the shape of post-operative suppurations, adhesions, hematomata, infection of the cervical stump, ventral hernias, and prolapse of the vaginal vault."

In addition to the above complications, we must remember the fibroids complicated by hemoglobin reduction to 30 per cent or lower, diabetes mellitus, kidney lesions, also extreme corpulency (a condition of no trivial importance). The mortality may be conservatively stated to be from 2 to 8 per cent, depending upon the operator and the conditions under which he is obliged to work.

Even if there were no mortality or complication, we must admit that a hysterectomy is accompanied with pain, frequently with protracted convalescence and hospital expense, covering two or more weeks. Radium will not, as a rule, detain a patient in the hospital over forty-eight hours. We have made no distinction between myomata and fibromyomata. Radium acts equally well in both. What we think we have learned is, that fewer milligram hours should be used where the uterus is soft or where there is a very rapid growth, either benign or malignant, the reason being that the newly formed cells, if broken down too rapidly, may produce a dangerous or even a fatal toxemia.

Radium acts by producing an endarteritis, and also by cauterizing the endometrium of the uterus. This action is superior to that of the *x*-ray in that the radium can be accurately placed, and requires but little time comparatively, and in intra-uterine application there is no danger of burning.

Amenorrhea follows radiotherapy in fibroma, producing an artificial menopause, which is a very undesirable condition in the young. Here, if given at all, the dosage should be light, aiming to control hemorrhage and not to produce amenorrhea.

The desirable time to use radium in quantity is at or near the menopause, ordinarily at the age of 38 or over.

If fibromyomata are causing neither pressure symptoms nor hemorrhage, they can safely remain untreated. Where mechanical symptoms predominate, operation is best. When hemorrhage alone is to be controlled, radiotherapy is the treatment par excellence.

The tumor does not disappear rapidly following radium treatment, but it gradually shrinks, which is due to cutting off its blood supply.

The small hard uteri, the general fibrosis type, with hemorrhage, can be absolutely controlled with one or two intra-uterine applications of 90 milligrams of radium for twenty-four hours. Large growths can be successfully treated by external application, but time and care are necessary. Should the radium treatment fail, we still can operate without added harm to our patient.

No attempt has been made to give the technic

of radium treatment, nor completely to cover the therapy; I have only roughly indicated what can be done with a valuable remedy but little employed.

REPORT OF 60 CASES OF FIBROIDS TREATED WITH RADIUM

Patient No.	Age	Milligrams	Hours	Milligram-hours
1	49	90	24	2160
2	41	90	24	2160
3	34	90	8	2700
	Second treatment	90	22	....
4	33	90	24	4320
	Second treatment	90	24	....
5	33	90	22	1980
6	53	90	24½	2205
7	37	90	24	2160
8	30	90	24	2160
9	48	90	24	2160
10	45	90	24	4320
	Second treatment	90	24	....
11	44	90	24	2160
12	48	90	12	1080
13	34	90	20	1800
14	39	90	25	2250
15	39	90	24	2160
16	47	75	24	3600
	Second treatment	75	24	....
17	43	90	24	2160
18	36	90	8	720
19	46	90	24	2160
20	46	90	24	2160
21	34	90	22½	2025
22	46	90	18	1620
23	40	90	22½	4005
	Second treatment	90	22	....
24	50	90	24	2160
25	50	90	24	2160
26	37	50	24	3112
	Second treatment	75	25½	....
27	45	90	14	1260
28	44	90	24	2160
29	42	90	24	2160
30	39	90	24	2160
31	48	75	24	4050
	Second treatment	90	25	....
32	49	90	21½	1935
33	46	90	20	1800
34	46	90	12	1080
35	43	90	24	2160
36	46	90	24	2160
37	41	90	24	2160
38	46	90	24	2160
39	40	90	14	2340
	Second treatment	90	12	....
40	37	90	24	4320
	Second treatment	90	24	....
41	45	90	24	2160
42	41	90	24	2160
43	38	90	24	2160
44	50	90	24½	2205
45	73	90	24	2160
46	48	90	24	2160
47	53	90	22	1980
48	56	50	24	3000
	Second treatment	75	24	....
49	37	90	24	4140
	Second treatment	90	22	....
50	42	90	3	2070
	Second treatment	90	20	....
51	52	90	12	1080
52	39	90	24	2160
53	49	90	22	1980
54	30	75	24	6120
	Second treatment	90	24	....
	Third treatment	90	24	....
55	46	75	24	3600
	Second treatment	75	24	....
56	No age	75	24	1800
57	38	90	25½	2295
58	40	90	24	2160
59	39	90	24	2160
60	43	90	24	2160

During the period covered by the report of the sixty cases above, I operated on seventeen cases of fibroid; and the reasons for operating were various. Some preferred operation, because they had never heard of radium, and feared it might be experimental or unsatisfactory, while some of the fibroids were so large they produced pressure-symptoms, and others were complicated by cysts or pus-tubes, and not suitable for radium treatment. All the patients operated on recovered without complications.

FOR DISCUSSION SEE P. 226

THE THERAPEUTIC RÖNTGENIZATION OF DEEP-SEATED LESIONS*

By F. S. Bissell, M.D.
MINNEAPOLIS

In the realm of Röntgen therapy advances have been rapid in the past few years. Various factors which were productive of error and failure, if not of disaster, are being eliminated or stabilized by the diffusion of knowledge.

Today the application of accurately measured and filtered doses of Röntgen rays to deeply seated lesions is producing therapeutic results approaching, if not equal to, the optimistic predictions of the more prophetic early Röntgen workers. Such results are obtained, however, only by the administration of maximum doses of the most efficient rays, and this demands operators with the courage and assurance born of knowledge and experience.

The progress of Röntgen therapy has been greatly retarded by the fact that in the past each therapist has been compelled by circumstances to acquire his proficiency solely in the school of his own experience, which has usually been one of adversity. Fortunately, this situation is no longer a compelling one, as there are now schools with efficient teachers who are willing and anxious to impart their knowledge to medical graduates or undergraduates.

The medical profession has been slow to appreciate the progress of Röntgen therapy since the not distant day when dosage was measured in minutes of exposure without regard to infinitely more important factors. Weil says, "Many persons judge radiotherapy by the results they obtained during the early years of its use; they forget that the radiotherapy of today differs from that of yesterday as fundamentally as the surgery of today differs from that of the era before Pasteur."

TECHNICAL CONSIDERATIONS

The scope of the present paper will not permit the writer to indulge a natural desire to elaborate upon technic; however, it may be broadly stated that the essentials of success in deep Röntgen therapy are the employment of very hard rays, the exclusion of softer rays by means of heavy filters, and the utilization of numerous small ports of entry, so that the cross-firing principle may apply to its maximum advantage. These, and an infinite patience and tireless perseverance, will sometimes stay the progress of cancer or delay the end in leukemia or Hodgkin's disease as one can hope to do by no other line of attack.

The quantitative measurement of rays at the skin may be determined with accuracy by means of the platinocyanide-of-barium pastille or the Kienbock strip, but that of the rays reaching the deeper structures must be estimated. Indirectly, the dosage may be measured according to Professor Shearer's formula, which is based upon the principle that the intensity of the rays varies inversely as the square of the distance of the tube-target, and directly as the square of the voltage required to excite the tube.

Thus, if we let X = the dosage, then

$$X = \frac{\text{Current} \times \text{Voltage}^2 \times \text{Minutes}}{\text{Distance}^2}$$

This factor of distance has safeguarded many unsuspecting patients who have been treated by the unskilled manipulators of those hospitals which are commercializing their *x*-ray departments.

Filters have been in use for many years, but they are even now becoming standardized as to thickness and character. I have been gradually increasing the thickness of my filters for deep work until I am now using 6 mm. of aluminum, and in a recent personal communication Dr. Pfahler, of Philadelphia, states that he is doing the same, although a short time ago 3 mm. of aluminum was considered ample for all purposes.

IRRADIATION SICKNESS

The necessity of employing massive doses of highly penetrating rays has led to the development of a new malady or symptom-complex termed by Beclere "Penetrating Irradiation Sickness"; by the Germans, "Röntgenkater" or "Radiumrausch," because to these minds it resembles the nausea following an alcoholic spree. The theory that this is due to an acidosis has been effectually disproven by a number of investigators. On the theory that it might be due to irritation of peripheral sensory nerves by the rays, I have recently treated a few cases with chloretone upon the suggestion of Dr. Louis Dunn, of this city. The results have apparently been very good, and, if this agent continues to act as favor-

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ably over a longer period of trial, it will, indeed, be a boon to those who have to undergo radiation treatment, either with radium or the Röntgen rays.

Patients who suffer with these symptoms are frequently prostrated for several days after each course of treatment. There are nausea and often vomiting, an aversion to food, and marked depression. In my experience, treatment directed below the diaphragm, and particularly through the epigastrium, is most productive of this "sickness."

RÖNTGEN RAYS AND RADIUM

The physiological action of Röntgen rays and the emanations of radio-active substances like radium, appears to be essentially identical.

There is ample clinical and experimental evidence that both have a direct inhibitory action upon certain types of cells. Thus the primary effect upon malignant tumors consists in the inhibition of the proliferative power of the tumor cells rather than in their direct destruction. The cancer cell becomes harmless, and is short-lived if it cannot proliferate. This action is nicely illustrated by the experiments of Isaac Levin and Michael Levine at New York University, Cancer Research Division. They injected plants with bacterium tumefacien, which produces a tumor-like growth known as "crown gall," which closely resembles human cancer. The plants, which were treated with Röntgen rays following injection, developed a pinpoint-sized tumor on the stem, in which a few of the characteristic cells were found, but the process ended there. In the untreated plants there developed, without exception, the larger tumors with multiplying cells, which eventually killed the plants.

Holding observed much the same thing in his experimental studies of cancer after radiation. The cells which remained were atrophic in appearance with a small shriveled-up nucleus hugging the cell-wall. Clinical experience seems to indicate that such cells, after a variable period of dormant existence, may regain their power of proliferation, and again become dangerous; and it is to check this possibility that cancer cases, symptomatically cured, are given several series of treatments at intervals of six months for a period of two or three years. This rule applies with equal force to cases treated surgically and to those treated solely by radiation. Since post-operative treatments are based upon the theory that nests of cancer cells which may have escaped the knife or cautery must be arrested by the rays, it is manifestly inadequate and, therefore, negligent to treat these cases less efficiently than those which are known to have active disease. The writer has no tolerance for the custom, very prevalent, especially in certain highly commercialized hospitals, of exciting an *x*-ray tube somewhere in the vicinity of a patient and giving this procedure the name of post-operative therapy. Since the rays of radium in sufficient quantity do not reach the deeper and more widespread metastatic paths of cancer, it is quite as important to combine röntgenization with radium therapy as it is to combine surgery with either or both.

Röntgen therapy as a palliative measure in hopeless malignancy is amply justified in the writer's experience. Pain is often relieved to a marked degree, the tumors become small or even disappear, hope revives, and the patient may live many months a relatively symptom-free life before finally succumbing to the disease. Such alleviation of symptoms and possible prolongation of life are sufficient warrant for röntgenization in all inoperable and recurrent maligancy, even were we to ignore the occasional unexpected cure of a supposedly hopeless case.

While the employment of radiation to the exclusion of surgery in the more hopeful earlier cases is not, and cannot be, advocated, it is interesting to speculate upon the possibilities in such cases, especially in cancer of the breast, in view of the profound effects obtained in the most unfavorable cases. Certainly there is a volume of statistics to support the claim that in epithelioma of the lower lip röntgenization produces results quite as good as those of surgery.

There is apparently a marked difference in the response to radiation therapy in different cases presenting identical clinical and pathological pictures. Thus I have observed complete disappearance and symptomatic cure of recurrent adenocarcinoma of the uterus in two cases, while other patients, apparently identical in all respects, have failed to improve under the same treatment.

One case deserves more extended mention because it tends to show that in the supposed cures the disease may be merely dormant and may become active under stimulation.

The patient, Mrs. C., had been operated on six months before, but, according to a letter from Dr. A. McLaren, of St. Paul, the carcinoma was found too extensive for complete removal. She was brought to my office upon a

stretcher very weak and markedly anemic from loss of blood. There was a large mass in the pelvis which bled freely upon slight traumatism. She improved under treatment, so that after three months she was able to return to North Dakota, returning every month for treatment. After one year she appeared perfectly well, and was able to assist in the field during harvest. Later it became necessary to perform a laparotomy to relieve intestinal obstruction, due to adhesions, and the surgeon, Dr. Louis Dunn, reported that he was unable to find any carcinoma in the abdomen or pelvis.

Now, the two interesting and instructive sequences in the case were, first, the tissue of the abdominal wall, apparently degenerated as a result of the intense *x*-ray treatments, completed more than a year before, refused to unite along the line of incision; second, during the convalescence the carcinoma again became active, and the patient died a cancer death three years after the original operation.

Tyler reports a case of inoperable carcinoma of the cecum, in which a short-circuiting operation was performed to relieve obstruction, and this was followed by intensive *x*-ray treatments. After two and one-half years the patient was living and perfectly well, the mass having completely disappeared.

Exophthalmic goiter is a disease which yields well, as a rule, to Röntgen therapy; indeed, the writer is inclined to believe that this is the method of choice in many of these cases. Most of the symptoms of hyperthyroidism disappear, and the gland gradually becomes smaller. In some cases the exophthalmos persists, while in others the tremor seems most difficult to overcome; but this is equally true after surgical removal. Like many others, I have found it an advantage to direct part of the treatment toward the thymus, whether the effect is upon a persistent thymus, as some believe, or upon the sympathetic nerve trunks. I believe, too, that I have found it advantageous to modify my technic, so that I now employ smaller dosage at more frequent intervals than formerly.

If the statement of Kraus, that Basedow's disease may be considered cured when the pulse becomes normal and remains so, is a correct one, then röntgenization is undoubtedly the method of choice in this disease, for it seems to be the consensus of opinion among all operators that this end can usually be attained even when other symptoms persist. In attacking the symptom-complex due to the persistent thymus in infancy the Röntgen rays act as a specific. To emphasize and re-inforce this statement I can do no better than to report a typical case and to say that six other cases which I have had an opportunity to treat have responded in the same manner:

Baby C. was referred to me on November 5 by Dr. Schlutz with a diagnosis of enlarged thymus. Röntgenograms confirmed this diagnosis.

There were marked cyanosis and inspiratory stridor. Respiration was very labored, and the baby seemed in extremis. The rays were filtered through 3 mm. of aluminum, the parallel spark measured nine inches and 5 ma. were employed, both anteriorly and posteriorly, for six minutes.

Dr. Batchelder, who was called to see the child that night, found the symptoms even more aggravated, and expected death at any moment. The following day, however, the child began to breathe with ease, and there has been no return of symptoms. Röntgenograms made three weeks later showed no enlarged thymus.

The study of the leukemic states, under the influence of radiation, is full of interest. The leucocyte curve is influenced to a remarkable degree, the general health always improves, the abnormal types of blood cells tend to disappear, and the spleen is reduced in size. My personal experience is that the spleen never becomes quite normal in size and that an occasional myelocyte may be found in cases otherwise quite normal. In all of my cases there has been an apparent improvement. Panton and Tidy emphasize the point that a diminution in the number of leucocytes is not necessarily a favorable sign, but may be the reverse. It has been my observation in about twenty cases which I have treated that improvement in strength and general well-being has gone hand in hand with the apparent improvement in the blood picture. Patients may be treated from time to time, and maintain a good state of health for years. The manner in which the rays affect the changes in the blood and clinical picture is still open to investigation.

Melchener and Wolff found that a spleen which, after removal from the living body, was exposed to Röntgen rays yielded a leukotoxin which, injected into a healthy animal, produced a marked reduction in the number of leucocytes, while a similar injection from a spleen not irradiated caused a leucocytosis.

The rationale of radiotherapy in uterine hem-

orrhage lies in the fact that the Röntgen rays tend to destroy the Graafian follicle, and thereby to control menstruation.

Since abnormal uterine bleedings usually arise from disturbances of the menstrual mechanism and are not due directly to local mechanical causes, they can be controlled by the proper administration of Röntgen rays. An artificial menopause may be produced almost at will and at any age. Since it should be permanent, however, the indications for Röntgen therapy become much more definite as the normal climacteric approaches.

Fibromyomatous masses shrink to a marked degree, often beyond recognition; but when the patient becomes symptom-free treatment should be discontinued. This result can usually be attained in from one to six treatments, given at intervals of one month.

So-called "essential" uterine bleeding is treated in the same manner, but very much more lightly, as the object here should be to control the excess without disturbing normal menstruation. It is my practice in these cases to employ the divided dose method, giving a fractional dose at selected intervals until the menstruation approaches the normal. While it may not always be possible to control the bleeding to as nice a degree as this, my experience has convinced me that such an end may usually be attained.

Hemorrhage from the grossly normal uterus in older women should always be treated by radiotherapy after carcinoma has been ruled out by diagnostic curettage.

During the past two years I have treated a series of twenty-five cases of uterine hemorrhage, due to fibromyomata, without a single known instance of failure to control symptoms. One case of menorrhagia of unknown etiology deserves a more detailed report because of its ready response to mild röntgenization.

Mrs. M., aged 22, was referred by Dr. Litzenberg on September 21, 1918, for uterine bleeding over a period of six years. This has been continuous for past eight months, and the hemoglobin is reduced to 50 per cent. She was given a dose of 10 X through only two portals of entry, but this light dosage appeared to suffice, since the bleeding ceased the following day. Since this time there has been but scant menstruation at normal intervals.

My personal experience in the treatment of uterine hemorrhage and myoma has been so satisfactory that I consider it conservative to say that radiation therapy is the method of choice in all such conditions occurring in women more than thirty-six years of age.

The course of Hodgkin's disease is materially modified by Röntgen treatment, but whether a fatal termination may be indefinitely postponed, as some authorities maintain, I have not had a sufficiently long experience to determine. The enlarged glandular masses, both mediastinal and peripheral, usually disappear, although they are sometimes rather persistent. I now have four patients under periodical observation. About every six months they are given a course of röntgenization, whether any signs of disease are found or not. It is hoped, by this procedure, that any tendency toward activity will be held in abeyance.

TUBERCULOUS GLANDS

The application of Röntgen therapy in chronic cervical adenitis is a well-established procedure. My own experience, however, may be of interest to this audience, and I have, therefore, reviewed a series of sixteen cases which I have treated during the past three years.

In all instances I have accepted the clinical diagnosis of tuberculous glands, although the marked difference in the degree of response to the same dosage has led me to suspect some variation in etiology.

Unlike certain writers who have described their technic, I have found it necessary to employ the harder rays and in considerable quantities, in order to obtain results. The usual course of events has been for the glands to become progressively smaller until they are either impalpable or small, hard, freely movable, and harmless. At the same time the general health improves, and the hemoglobin increases. Three patients have proven exceptionally recalcitrant. Two of them have improved slightly, while the third is still under treatment. There is, or has been, a focal-infection factor in all three cases, and this fact lends force to the suggestion that they are not uncomplicated cases of tuberculous adenitis.

In one case there was a very profound reaction, followed by unusually prompt and rapid improvement. This patient, a sixteen-year-old girl, had a large mass of glands in one side of the neck. They had been growing slowly, and had not been given serious attention until recently. On the night following the first treatment they became much more swollen and painful, but the following day they began to recede

rapidly, and in six weeks, after two treatments, had entirely disappeared.

It is the custom at the Mayo Clinic to recommend post-operative treatment, and they have referred a number of cases to me for that purpose. There are usually palpable glands in these cases, but no large masses, and the end-results have been entirely satisfactory.

My present conclusions relative to cervical adenitis are as follows:

1. Röntgenization should be the therapy of election in practically all cases.
2. If this fails, more thorough search should be made for other causes than tuberculosis.
3. Surgery should be reserved for the cases in which radiation has failed after a fair trial.
4. There is no objection to concomitant tuberculin therapy, although it is usually not necessary nor advantageous.

ANGIOMATA AND NEVI

While angiomata and nevi are superficial lesions, the same technic is employed in treating them as is applied to deeper lesions. Under heavy dosage and filtration both conditions yield to Röntgen therapy, with results usually highly gratifying to the patients. A case recently completed came in several months ago with a large ugly looking angioma of the forehead, which had been growing rather rapidly. When discharged the skin was smooth and only moderately discolored.

A case of warty nevus surrounding the ear is now under treatment. Four weeks ago, one-half of the lesion was given 20 X without filter. The photograph made last week shows the result.

One notes a tendency on the part of many writers to speak of the emanations of radium and mesothorium, as though they were specifically unrelated to Röntgen rays; nevertheless, all clinical and experimental evidence tends to support a converse statement, that highly filtered hard rays from a Coolidge tube have much the same physiologic action and therapeutic effect as the gamma rays of radium.

Dr. Russell Boggs, of Pittsburgh, who has had wide experience in the use of both agents, makes the following statement:

"It would require 92 grams of radium to give the same dosage at a depth of 10 cm. as may be administered by means of the Coolidge tube." This quantity, of course, is utterly prohibitive.

Radium, on the other hand, possesses a great advantage in the attack upon lesions accessible to cavities, as the mouth, vagina, and rectum. In the treatment of cancer, however, the röntgenization of possible metastasis should no more be neglected in conjunction with radium therapy than after surgical removal of the primary lesion.

To quote Boggs once again:

"Experience has shown that we cannot treat successfully with radium at a greater depth than two or three cm."

"The modern Röntgen tube powerfully excited gives off many thousand times more rays than any quantity of radium anyone has ever used."

From the standpoint of practical application, the advantages of properly applied Röntgen rays seem greatly to outweigh those of radium in the treatment of deep-seated lesions, first because there is not the same limitation as to quantity of radiation which may be applied to them, and, second, because the rays may be distributed over a much wider area of possible involvement.

DISCUSSION OF THE TWO PRECEDING PAPERS

Dr. Olga S. Hansen: I wish to report a case of fibroma of the uterus treated by the Röntgen ray.

A woman, aged 44, came with a marked anemia, and a history of profuse menstruation for many years. No tumor of the uterus was found at this time. She responded very promptly to iron therapy, and was not seen till three years later, when she had a profuse vaginal hemorrhage, and showed a firm mass that filled the pelvis, and extended up to 4 cm. below the umbilicus. Measurements were recorded. After two *x*-ray treatments, at four-week intervals, the mass was again measured, and found to have descended about 3 5 cm. from its former upper borders, and it no longer extended laterally to the iliac fossæ.

At the present, five months after the treatments were begun, the mass is much smaller, but can still be felt by external palpation. There has been no bleeding, menstrual or otherwise, since the first treatment. The patient has had none of the nervous manifestations of the menopause, and has been able to keep at her work as a teacher without interruption.

Dr. Thurston William Weum: As regards the excellent results obtained by Dr. Little in the use of radium for the treatment of uterine fibroids, I wish to mention a few of the therapeutic uses to which radium was applied in gynecological cases in some of the Chicago clinics a year ago. I saw it used frequently in the clinics of Dr. T. J. Watkins. The dosage used by Dr. Watkins was much less than that used by others, in that only 50 mg. of radium were used, and the length of exposure in fibroids varied from six to fourteen hours, the dose to be repeated at a later date if found necessary, generally two weeks or a longer period intervening. Its use in the treatment of endocervicitis and endometritis, where the adnexa were found to be negative, gave excellent results, the 50 mg. being used in two- to six-hour exposures, depending on the age of the patient and the degree of inflammation.

In inoperable carcinoma of the uterus, radium will often give fair results by checking the rate of the growth and sometimes by converting it into an operable

one. The exposure is much longer, fourteen to twenty-hour hours, and is repeated in six weeks or later.

Treatment by radium has already given such excellent results that only its enormous cost prevents a more general use of it. It is only a question of time before the amount of dosage will be established for the biological effect on different pathological tissues, as well on the cells of normal tissue, the latter showing greater resistance to its rays.

Dr. J. C. Litzenburg: I have had no experience with radium in the treatment of either fibroids or cancer of the uterus. Unfortunately, we have no radium at the University, so we have only had access to the use of the Röntgen ray, but I must say that our results have been very encouraging. I have referred from the Dispensary of the University many cases of fibroid of the uterus to Dr. Bissell. Our results have been very good, indeed. So favorable have they been that we believe that in patients who have fibroids and are nearing the menopause, it is better to treat them by radiation than by operation, unless there are particular symptoms and the fibroid is extremely large, demanding operation.

In private work I have also had Dr. Bissell treat a number of cases in which we have obtained satisfactory results as to stopping the hemorrhage. I recall one case in particular, a young woman who had been bleeding almost every day for many months. She had had all kinds of medical treatment by different physicians, such as the use of ergot and stypticin, but with unsatisfactory results. She had been curetted, but nothing seemed to effect her bleeding for more than a short time. The patient was referred to Dr. Bissell, who, on account of her being a young woman, gave her only a light treatment, for he did not want, by any chance, to stop her menstruation entirely. This one treatment was sufficient to stop her bleeding, and she has since menstruated normally.

Many of the cases of cancer of the uterus that we see at the University Hospital are inoperable. These patients come to us late, and are in very bad condition, as a rule. However, by radiation nearly all these patients have been very greatly benefited, especially as to stopping the bleeding, eliminating the foul discharge; and many of them, undoubtedly, have had their lives prolonged; though, of course, we know they are not cured so far as their cancer is concerned, but, it seems to me, it is worth while to use this most valuable method, making their lives as comfortable as possible.

A measure which will stop bleeding, eliminate discharge, and relieve the pain of inoperable cancers is certainly a great boon.

Dr. A. S. Fleming: I wish to express my appreciation of and interest in two papers delivered here this evening. While my association with Dr. Little has enabled me to observe the effects of radium in the cases reported by him, I have been particularly interested in the report of the work done by Dr. Bissell with deep *x*-ray radiation in the treatment of fibroids and other conditions in which radiotherapy is indicated. The fact must not be lost sight of that radium and deep *x*-ray therapy, as yet, must be looked upon as adjuncts secondary in importance, in most cases, to surgery in combating malignancy; but, in fibromyomatous conditions in the uterus, free from complications warranting surgical interference, it is the method of choice.

I want to emphasize the ease of application of radium, the short hospital residence (twenty-four or forty-eight hours), the need of a light gas anesthetic, except in nulliparous women in whom the cervix may need dilatation, and the fact that one treatment suffices to remove all symptoms in the majority of cases. When contrasted with the major operation of hysterectomy or even with the repeated exposures to the *x*-ray with its attendant danger of severe skin reactions, these advantages make radium, in my opinion, decidedly the weapon of choice in our attacks upon fibroid conditions. In the treatment of fibroids in younger women, we are endeavoring to check their development, and relieve the symptoms without bringing about the menopause. Owing to the many variable factors in the problem, such results have been hard to secure, but by using smaller and, if need be, repeated applications, we hope, with the aid of further experience, to meet with more nearly uniform success.

Wonderful as are the results of radium therapy in fibroids and non-malignant hemorrhagic conditions of the uterus, they are no greater than the effects of radium on malignant growths in the cervix uteri. So uniformly hopeless have been these cases when found, and so discouraging to both patient and physician, we had little to offer the suffering victims but narcotics to deaden the pain and dull the intellect to a sense of their impending doom. Not always, but with a surprising frequency that justifies it, the application of radium to the most discouragingly looking case will transform it, as if by magic, from one of pain, with a foul, stinking discharge and loss of weight and strength, to freedom from all these symptoms in the course of a few weeks. Such patients may not be cured, but the progress of the growth is stopped, and they go on in comfort and apparent health for weeks and months, and some of them for years.

Dr. F. S. Bissell: That the physiologic action of Röntgen rays and radium is essentially the same, is indicated by the reported studies of various observers, as well as by every-day clinical observations. Each type of radiation has its most marked effect upon new growths whose structure consists mainly of nucleated cells rich in mitotic figures, in which new growth is rapid, and which are consequently rich in small, poorly formed vascular channels. The more embryonic type of cell is most affected by the rays. Thus is explained the more ready response of adenocarcinoma than of scirrhus carcinoma of the breast; also of the teratomata and the adenomata of the ovary. In the sarcomata we note the same tendency, those of the lymphoid type responding much better than the spindle or round-cell sarcomata of connective-tissue origin.

It is interesting to note the small dosage required in Dr. Little's series of cases to bring about a cessation of uterine bleeding in myoma.

While I have followed the plan of giving my cases a larger number of treatments, my impression is that in practically all of them the hemorrhages ceased after the first treatment, and that the subsequent ones were directed rather to the reduction of the tumor mass and to rendering the menopause permanent.

It will be interesting to try the effect of lighter dosage of Röntgen rays upon a series of selected cases.

RADIUM IN DERMATOLOGY*

By S. E. Sweitzer, M.D.
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MINNEAPOLIS

Radium can be used in many diseases of the skin, but it is better to reserve its use to those conditions in which it gives results better than other therapeutic agents; therefore I have employed it in the treatment of the following diseases: epithelioma, nevi (both vascular and pigmented), lupus erythematosus, keloid, plantar warts, and leukoplakia.

In certain selected cases of lupus erythematosus, it is possible to achieve most excellent results. New lesions are, of course, not prevented from occurring.

In keloid we are enabled to cause a flattening of the lesion and the formation of a smooth supple scar without recurrence of the lesion.

Plantar warts often recur after surgical removal. One short exposure of unscreened radium is usually sufficient to cause their permanent disappearance.

Leukoplakia is a precancerous condition and very difficult to remove, but, in many cases, radium will cause its complete cure. In this connection, it is well to remember that leukoplakia is usually due to syphilis and irritation, so that treatment for syphilis should be instituted if that is a factor, and excessive smoking or chewing should be avoided.

I will illustrate the subjects of epithelioma and nevi by the report of a few cases:

Case 1.—Helen L., aged 5. An angioma on the nose, the size of the end of thumb. Treated mostly with screened doses. Required several repetitions, and finally a dose was given strong enough to cure an epithelioma. The result was excellent, and has remained so.

Case 2.—Mr. E. L. H., aged 27. Epithelioma on the lower right eyelid. The patient lived in western North Dakota, and says that an irritation was set up from alkali dust; an ulcer formed, and has been present four years, gradually eating away the lid. Treated in January, 1916, four hours total unscreened, and the patient has been well ever since.

Case 3.—Mrs. L. H., aged 53. Epithelioma on the right cheek near the eye, which began twenty years ago, but has been growing rapidly only of late. It was treated in October, 1916, a total of five hours unscreened, and the dose was repeated in December, 1916. The patient has been well ever since.

Case 4.—Baby A., aged 6 months. Large angioma on the right ear. In December, 1916, a cross-fire treatment with two applicators was given, partly screened with $\frac{1}{100}$ mm. aluminum and partly unscreened. The exposures were short (of fifteen or twenty minutes' duration). In March, 1917, the treatment was repeated. In May, 1917, a few short treatments were again given. The results were most excellent.

Case 5.—Mr. P. K., aged 71. Large epithelioma on the left cheek with lesion elevated about ¼-inch above the surface. In January, 1916, he was treated with radium unscreened for a total of five hours. In March, 1916, the dose was repeated. In April, 1916, he was treated a total of eight hours, screened with $\frac{1}{10}$ mm. silver for a deep effect. This case was cured, but less treatment would have been required if the hard edges had been curetted off first.

Case 6.—Baby W., aged 3. Black pigmented nevus on the left cheek. The lesion had a few white scars produced by previous treatment with an electric needle. The treatment started in April, 1915, and consisted of short exposures screened with $\frac{1}{100}$ mm. aluminum. These exposures were repeated at intervals during 1915 and 1916 with a very beautiful result.

In treating lesions upon the face, the cosmetic results must be kept in mind, and this explains the long duration of the treatment of some varieties of nevi.

In regard to epithelioma: The results obtained are as good or better than can be obtained by any other method, and, if we considered only the results in these cases, radium would be well worth while in dermatology.

*Presented before the Hennepin County Medical Society in 1918.

ACUTE PERFORATIONS OF THE STOMACH AND DUODENUM

By George R. Curran, M. D.
MANKATO, MINNESOTA

Acute perforations of the stomach and duodenum may be caused by violence. A full stomach is easily ruptured by a kick or a fall. Concussion may so traumatise the stomach wall that an ulcer will ensue. Foreign bodies that have been swallowed may pass through the coats of the stomach. Bullets, shrapnel, and other foreign bodies have all been found lodged in the stomach The size of the wound of entrance bears no relation to the wound that may be found in the stomach. The bullet that lodges in the stomach may have its point of entrance in some remote part of the body.

The greatest cause of perforation of the stomach is ulcers. Fifty per cent of peptic ulcers perforate. It has been said that very few ulcers in the stomach of women are diagnosed clinically until they perforate. Only about 3 per cent of perforating ulcers of the stomach are acute perforating ulcers. These are situated on the anterior surface of the stomach and duodenum. The other 97 per cent belong to the protected perforating ulcer class. These ulcers are protected by their location. The hepatic omentum, the gastrocolic omentum, and the colic omentum and other tissues help close the perforations. These insidious leakages are the cause of abscesses under the diaphragm and liver, and point into the lung or any other part of the body.

The perforation of the stomach in cancer cases is not uncommon, as most cancers of this organ select the crater of an old ulcer as their starting-point. The stout, florid young woman is the favorite subject for acute perforation of the stomach, while the robust man of from 35 to 40 years of age is often selected as a subject for acute perforation of the duodenum. As most of these acute perforations are on the anterior surfaces of the duodenum and stomach, the perforation lets loose the contents into the greater peritoneal cavity. The leakage from the stomach gravitates into the pelvis, while the leakage from the duodenal ulcer is deflected by the transverse and ascending colon to the right side of the pelvis.

The abdominal cavity is not only filled by these leakages from the stomach, but the irritated peritoneum starts peritonitis, which gives off much secretion. Very few cases of acute perforation have had their ulcers, the cause of this perforation, diagnosed beforehand, for the majority of these cases have never presented themselves for diagnosis. The history that is elicited at this time usually shows that they have passed through many years of indigestion. The first symptom of an acute perforation is agonizing pain. Over ¼ gr. morphine must be given. The shock is prostrating, the pulse weak and thready, and the skin clammy; and many feel that death is imminent. There are rigidity of the abdominal muscles, especially on the right side, and tenderness on pressure. The accumulation of gas in the abdomen soon obliterates the liver dullness. The pain of the duodenal ulcer is now over the duodenum itself, and runs back to the scapula. The pain, which usually begins at McBurney's point, is now over the perforation. These are such classical symptoms of gall-bladder troubles that gall-bladder trouble is the logical conclusion to draw at this time.

Many patients with acute perforation have been operated on for acute appendicitis, their real trouble being overlooked; and they have all promptly died. There has never been any better success with these cases that were wrongly diagnosed as acute appendicitis, when they were getting the Ochsner treatment. While the Ochsner treatment may be the treatment for acute appendictis, the acute perforating ulcers under this treatment all go wrong. Doctor Codman, of Boston, was one of the first to help differentiate the acute appendicitis from these cases of acute perforation by a systematic examination of the patients with this trouble who had died in the Massachusetts General Hospital. He showed that these acute perforations of the duodenum were being treated as appendicitis, and the mortality was being added to the statistics of death from acute appendicitis, and the operation of acute appendicitis could not bear the added odium at that time.

We have now in the *x*-ray plate and in the fluoroscope an almost positive diagnosis for an acute perforation. There will be the usual findings of chronic ulcer. A diverticulum will be found extending outwardly from the perforation, and its crater will be filled with bismuth or barium, whatever has been used. The morphine,

heat, and other remedies may, in a short time, make the patient and his friends feel that all danger is past.

Dr. W. J. Mayo gives nineteen hours as the great danger-line that should not be crossed, if possible, if we expect any results. Mr. Morrison, of England, gives these valuable statistics taken from his clinic:

	Operations	Deaths
At 6 hours and under.....	3	0
Over 6 hours and under 12....	7	1
Over 12 hours and under 24...	1	0
Over 24 hours and under 48...	2	2
Over 48 hours.....	6	4

These very terse statistics tell very forcibly the danger of delay.

Very little can be said on technic except to operate as soon as the diagnosis is made. An adequate drain over the pubes should be used. Mr. Morrison says that he has never yet seen a patient get well with a drain in the epigastrium, another over the pubes, and one also in each flank. The perforation should be sutured. The tendency now is to remove the ulcer by cautery or excision. The majority of surgeons are performing gastro-enterostomy. Of course no surgeon would do the latter if the patient was in extremis. The usual post-operative treatment for gastro-enterostomy would be followed.

I have these cases to relate:

A farmer, aged 40 years, was marketing a load of hogs immediately after dinner. While on the way to town he was taken with violent pains in the right side. As soon as he got to town he called his doctor, who diagnosed gall-stones, and took him to the hospital. As the symptoms kept getting worse he felt that an operation should be done immediately. I was called, and arrived at about six o'clock. As the abdomen at that time was becoming distended, I made an incision in the medial line above the pubes. A light, flocculent fluid gushed forth, which at once suggested a perforation of the stomach. The incision was extended rapidly to the epigastric region, and a perforation of the duodenum was disclosed. This was sutured with chromic catgut and the man made an uneventful recovery. No gastro-enterostomy was made in this case.

Johnny Jay, a farmer's son, aged 16, after a heavy supper one September evening, started to ride his bicycle to town. It was then dark, and he ran into a one-horse buggy, the thill on the left of the horse penetrating the boy's chest, going between the ribs in the 5th and 8th interspace next to the sternum of the left side. He was extricated with difficulty, taken home, and his doctor sent for, who at once took the patient to a hospital. As the only apparent danger was the small hole in the chest the doctor properly diagnosed the trouble as all in the chest and lung. The patient was in profound shock, but heat, morphine, and other remedies made this soon pass away. The next morning there was evidence of bloating, and the pulse began to mount upward.

I saw the patient that day about four o'clock and operated immediately. The first incision in the medial line over the pubes showed the characteristic fluid from the stomach, with a stomach odor, and the incision was at once extended to the sternum. This disclosed tears in the anterior and posterior surfaces of the stomach, each about three inches long. These tears were closed with silk, using the Connell suture. Most of the meal the boy had eaten the night before, except the fluids, was found lying on the gastrocolic omentum. The boy made a good recovery calling often for gastric lavage, which probably relieved the gastric tension. A drain was placed where the shaft entered the chest, and one over the pubes. There was only one thing to mar this brilliant recovery and that was that he became insane about a year afterwards. The shock of that catastrophy probably had something to do with it.

Mr. C., aged 56, had worked on the railroad section for many years. He gave a history of having had a period of indigestion for over thirty years. He was taken suddenly ill with a violent pain in the right side, and his doctor was sent for. His condition was diagnosed appendicitis and gall-stones, and he was kept in bed for over two weeks. Then he was sent to the hospital, when I first saw him.

His symptoms then were the usual ones of gall-stones. The examination findings gave the blood and urine negative. The operation showed a mass of adhesions on the right side, involving the appendix, and there was a carcinomatous mass between the pylorus and transverse colon under the gastrocolic omentum. This mass was adherent to the parietal wall. This perforation of the stomach, though of considerable size, was changed by its location from acute perforation to a protected perforation by the abdominal wall, and gastrocolic and colic omentums. A gastro-enterostomy was done, and the perforation closed, but it broke down again in a few days, and the patient did not recover.

The symptoms of perforation of the stomach and duodenum are so strikingly similar to those of gall-stones in the cystic and common ducts and to those of acute appendicitis that we must use unusual care and pains to differentiate them. If possible the *x*-ray plate or fluoroscope should be used. If these findings are negative the illuminating scalpel should be used as soon as possible. The contents of the stomach are usually quite sterile, and the results of operations on acute perforation during the first twenty-four hours are very good, while the results of operations after forty-eight hours are always disastrous.

THE
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THE SECOND MINNEAPOLIS CLINIC WEEK

We believe that too much cannot be said as to the value of the second Minneapolis Clinic Week. It will deal, almost exclusively, with the problems facing all physicians daily, not alone city physicians, but all physicians. The spectacular will be avoided in the surgical clinics, as will be the speculative in the consideration of the medical topics in the afternoon symposiums.

All physicians in the Northwest are invited to attend the meeting. If anyone fails to receive a letter or card of invitation, he is not to think he is not personally invited, for the invitation is to all medical men and women.

THE TIME OF THE MEETING

Clinic Week covers four full days of work: Tuesday, Wednesday, Thursday and Friday, May 6, 7, 8 and 9. Some of the clinics will begin at an early hour and continue till 1 o'clock; and each symposium will begin about 2 P. M., and continue throughout the afternoon.

Fuller details will be given in a letter to be mailed about May first; and also in programs to be obtained at the Radisson, which will be headquarters.

We publish a partial program on another page.

THE MINNEAPOLIS PUBLIC-HEALTH SITUATION

For the first time in many years a bill governing the public-health system of Minneapolis has been passed by the Minnesota legislature, and is called "The Minneapolis Public Health Bill." It has been much opposed by some of the resident politicians in Minneapolis, and has been criticized severely by the Minneapolis Health Department.

One or two amendments have been added, relating to the appointments and to meet demands from the Board of Education, which make the bill palatable, at least, and it probably will be satisfactory for our present need. It carries with it the appointment of a public-welfare commission, four of whose members are to be appointed by the mayor, and two by the council. This will be a gratification to the interested worker in public-health lines, and will probably lessen the friction which necessarily rises between the two or three governing bodies in a large city.

In commenting upon public-health measures, it may not be out of place to quote, from memory, what has been said by a public-health man of national reputation, regarding public-health measures and the attitude of the public toward public-health officers. The first comment is that there is something degenerating and demoralizing about the long-continued practice of philanthropy; and after a man has been in philanthropic work for fifteen years, he is very apt to lose some of his moral tone. This man was evidently somewhwat pessimistic in his remarks when he said that he had about decided he would prefer to raise pigs for the rest of his natural life rather than be known as a philanthropist and feel the approach of degeneracy. He says, further, that he has come to doubt seriously of late years whether our public-health activities are ever going to amount to much until they are put on a purely commercial basis. When health is recognized as a commodity, worth all the dollars and cents that it costs, and to be estimated in the same way, and not as either a charity or a philanthropy, it will probably get along faster. He says that this may be an example of rank heresy, for which he ought to be burned at the professional stake.

In commenting upon Dr. Bracken, he says that he has always had the utmost confidence in his honesty and sincerity. "I don't know why I have always felt about him as I have, but I have never taken his barks seriously,—that is, I have always recognized the fact that Bracken was the type that had to say what he thought, generally in the bluntest and the most straightforward manner possible, but that, having said so, he was always ready after he had expressed his mind, to do

what was best and wisest under the circumstances."

And another big medical man, who is now dead, made this comment: "When it comes to give and take, Bracken is one of the broadest and easiest men to work with that I have found."

Of course, there are some people who cannot tolerate a man who always says what he thinks; but to the writer it has been a great relief to get away from the man who always weighs every word and stops to consider what effect anything he says may have on his political schemes or his personal ambitions, and to get with a man like Bracken for a little while, because one feels sure he will tell exactly what he thinks about things and give his honest judgment about things without regard to motives of policy. Personally, the writer is very fond of Bracken, and has greatly appreciated his advice and help.

We allow ourselves too often to be drawn into the attitude of partisans in public-health matters, instead of maintaining our position as expert advisers. We relieve the public of far too much responsibility, and we also are convinced that for a long time we carry law-making in the public-health field to the extreme. There is a legitimate field for legislation in public health, but it is limited far more to the matter of education than it is to legislation. In a word, our function in this field is that of the teacher, rather than that of the sanitary policeman; but education is a long, slow, and painful process. It seems so much easier to pass a law, saying that certain things shall be or shall not be, and then to go away and convince ourselves that we have really accomplished something; but no law is of any value unless it contains provisions for its enforcement, and much of our public-health legislation is simply fiat law, which is of about as much value as the old fiat money of green-back days.

If the Christian Scientists in Minnesota are strong enough in their efforts to defeat needed and rational public-health legislation, then the best thing to do is to put the responsibility squarely on them, and let the people of the state understand it. The principal difficulty about legislation on public health is that the essential issues are not made clear. We understand them ourselves, and we assume that the public and the legislators do, because we assume that they know as much about the public as we do. They do not, and cannot, and in this field both our psychology and our pedagogy have been rotten. If the teachers in our public schools used the same methods in teaching the children that we use in teaching the public, we would insist upon their being dismissed at once. This same thing applies to the teaching of any class of people,—medical students or the public. We are very apt to talk over their heads, when the elementary essentials are what they need and what they want to know; and the man who teaches in a simple and understandable way, or the man who writes so that the average medical man and layman can understand what he means, is the best kind of a teacher, all of which comes down to one important fact, and that is, that, in our activities to pass laws for the improvement of public health, there has been far too little thinking and a great deal too much imitation.

THE MINNESOTA LEGISLATURE IN RETROSPECT

By the time this issue of THE JOURNAL-LANCET reaches its readers, the legislature probably will have adjourned, and with it many of the annoying situations which have crept into the present session will disappear. The bills passed so far have, fortunately, not been very many in number, but some of the bills relating to medicine and public health, have been thrown into the waste-basket, where a great many others will lie; and it is with a good deal of satisfaction that we express our comfort and joy that nothing serious has happened to Minnesota medical laws.

Even though the Christian Scientists, through the clever advertising that Mr. Henry Deutch has enjoyed, laughing in his sleeve while opinions are flying back and forth, have accomplished nothing serious, except the passage of the Rodenberg bill, preventing the compulsory examination of people suffering from communicable or preventable diseases. The fact that the House passed this bill, under the benign smile of Mr. Deutch, is not a serious matter; and it seems possible that it may meet its death blow in the Senate. This is our hope, and, if so, public-health laws will stand substantially as they have been before.

A very clever paragraph recently appeared in the *New York Tribune* relating to a situation created by Mayor Hylan of that city, who demanded that the records of the Board of Education and the Superintendent of Schools be handed over to the mayor for investigation. Mr. Ettinger, the Superintendent of Schools of New York, made the following statement: "The school system of the world's greatest city," he said, "cannot be dislocated at will by every politician who stops temporarily at the City Hall on

his way from obscurity to oblivion." This paragraph expresses, in a very forceful manner, the attitude that many of us feel toward public legislators and toward obscure politicians.

The Rodenberg bill has been attacked by many who understand public-health measures much better than does Mr. Deutch, and the substance of the criticism of Mr. Deutch's position is that he knows nothing about present-day public-health measures. The passage of the bill would be retrogressive, and would probably inflict upon the community more harm than it would be possible to recover from in several years. Consequently, our hope and trust is in the Senate, which will, with wise consideration, not be stampeded into adopting an unfortunate measure.

The appropriations committee again reduced the amount appropriated to the State Board of Health for the relief of venereal disorders. Instead of $36,000 hoped for, it was made $30,000, and $22,000 will be the Federal appropriation. (The Rodenberg bill was killed.)

OVERORGANIZATION IN PUBLIC-HEALTH WORK

The existence of over a dozen organizations dealing with public-health work in the City of Minneapolis, may suggest that health work here, as elsewhere, is overorganized; but we do not recall a failure of sufficient importance on the part of a single organization to call for such a criticism; and yet we cannot dismiss the thought that the combined efforts of, say, the three best workers in any three selected organizations, with competent assistants, would accomplish much more if the three branches of work were combined under their management. The arguments in favor of such combined work are too obvious to need statement, but the practical argument against it is that perhaps the leaders in three separate organizations could not be induced to do team-work, for no two of them would be willing to be made subordinate to the third.

Now, the statements made above are based upon facts in human nature, the truth of which cannot be gainsaid, nor can the facts be ignored. If the necessary leaders can be obtained, even though it be possible only because of the love of leadership, then we say the number of organizations matters little provided the work is done, and done well.

Fifteen organizations in Minneapolis have united on a combination of efforts, that is, team-work, for a week; and so we feel compelled to ask why any three or more closely allied societies cannot work in combination for a year, with the "overhead" greatly reduced, whether we mean by "overhead" money or human effort.

We have all seen the evils of overorganization; and reference is here made to it because we have seen in Minnesota an illuminating example of the evils of public and private organizations in clash.

A NEW PLAN FOR A HEALTH BOARD

Sioux Falls, S. D., has under consideration a plan for city health work that is comparable to the commission plan of city government at its best. Recognizing the fact that good health work is not done under the compulsion of drastic ordinances or of a paid officer who will not make himself obnoxious by compelling the observance of unwelcome laws, the city proposes to create an unpaid commission of three public-spirited citizens who will act from patriotic motives, ignoring both politics and graft. Their duty will be to educate the citizens in all public-health matters, and to show them that health regulations are highly necessary and beneficial. The presence of an unpaid board will do almost all of this work without effort.

With such a body in existence composed of men whose personal motives are above suspicion, any reasonable ordinances will be observed by all law-abiding citizens; and therefore the most difficult problem of health work is half solved.

The next step is proper and just ordinances. The Young Men's Booster Club and the Rotary Club of Sioux Falls, under expert advice, have agreed upon the lines of work for a beginning, and no "fool" ordinances impossible of enforcement will be proposed or passed.

The Board of Health will employ a salaried assistant, who will work under them and will pass back to them the responsibility for any unpleasantness that may arise out of his observance of instructions.

This plan is for the purpose of making a better city to live in; and such a city will soon become known as a better city to live in.

The cost of the work need not be heavy, and, measured by any standard of health values, it will be infinitesimal.

We shall not attempt to go into the details of the plan. We simply want to point out its value as measured in an aroused public demand for proper health conditions in the houses of both the rich and the poor—in its health and life-preserving possibilities.

CORRESPONDENCE

A ROUND-UP OF UNLICENSED PRACTITIONERS IN NORTH DAKOTA

The State Board of Medical Examiners of North Dakota have started an old-fashioned round-up, with unlicensed physicians as the "cattle" to be corralled. Dr. G. M. Williamson, the secretary of the Board, requests us to publish the following letter to the members of the North Dakota Association:

To the Members of the North Dakota Medical Association:

I am anxious to obtain the names of all unlicensed persons practicing medicine and surgery in the state, and I take this means of asking you to report any unlicensed practitioner to me, so that I can have an opportunity of asking him to qualify at the next regular examination, beginning July 1.

If you are in doubt at any time that a certain person is unlicensed inquire at the office of the Register of Deeds for your county, where all physicians practicing in the county must be registered as provided under Sec. 12: Medical Practice Act, 1911, which reads as follows:

"Every person who shall receive a license from the State Board of Medical Examiners shall have it recorded immediately in the office of the Recorder of Deeds of the county in which he shall maintain an office for the practice of medicine. . . . If the name of such person shall not so appear in such book in any particular county in this state in connection with a description of such license provided for in this Act, such fact shall be prima facie evidence in any civil or criminal action involving the practice of medicine by such person in such county, that such person does not possess in full force or virtue a license to practice in this state."

If you will give this communication attention at once the Board of Examiners will be grateful.

Yours truly,
G. M. WILLIAMSON, M. D.,
Secretary.

Grand Forks, N. D., April 19, 1919.

A COMPLIMENT

To the Editor:

I just got through reading your article in the JOURNAL-LANCET of March 15, on the all-year-all-round-school plan. It impressed me so strongly that I wish to compliment you on the soundness and clear thought you conveyed in your paper in regard to the child's work in school, etc. I have been a teacher and have a family of children from which I draw my conclusions that there is an over-glorification, an over-estimation, of the precocious child in our present educational system and too much red tape, at the expense of the physical force of the child. Some of our hysterical educators do not understand this. An article like yours spread for digestion to the educators, I think, will do more good than weighing and measuring children in which society women shine—vanity in passing laws, having tonsils taken out, and God knows what, or in many other ways assuming parents' rights.

Sincerely,
A. KUHLMANN, M.D.

Melrose, Minn., April 10, 1919.

BOOK NOTICES

MILITARY HYGIENE AND SANITATION. By Frank R. Keefer, A.M., M.D., Col. M.C., U. S. A. Second edition, 1918. Price, $1.75. Philadelphia: W. B. Saunders Company.

This revised edition of Colonel Keefer's standard work upon elementary military hygiene and sanitation is one which will meet with a hearty reception by the larger number of our profession who are now interested in military affairs. In some years past the book has been used as a text-book at West Point, and during 1917-18 in the medical officers' training camps. The new issue will prove useful to those now entering the reconstructed Medical Reserve Corps.

Colonel Keefer covers the subject very thoroughly, and, while not going into deeper discussions of the diseases and conditions found in military life, he gives a very clear, concise, and readable exposition of the essentials that every officer should know, especially line officers who are (or were) apt to ignore or belittle the sanitary orders of the medical corps.

This book is an epitome of the ways and means in vogue in our army to reduce the death-rate to its surprising minimum, and as such it can well be studied by all officers of the National Guard and Reserve forces, and by others who may have charge of large groups of men in camps or on the march. —PERRY.

EQUILIBRIUM AND VERTIGO. By Isaac H. Jones, Major, M.R.C., United States Army, with Analysis of Pathological Cases by Lewis Fisher, M.D. Philadelphia, Pa. Adopted as a standard for the Aviation Section by the Surgeon General and Chief Signal Officer of the U. S. Army. 444 pages. Philadelphia: J. B. Lippincott Company, 1918.

When many of us were in school we were taught that man is endowed with five so-called special senses, namely: seeing, hearing, feeling, tasting, and smelling. To these have been added two more. The sixth sense is, the muscle, joint and splanchnic, and the seventh sense, the kinetic-static, which is presided over by the labyrinth of the ear. This seventh sense, the latest discovered, opens to us a new avenue of study, that of neuro-tology, a most interesting subject, a thorough knowledge of which would make it possible for us to diagnose many brain and ear conditions which have been very misleading in the past.

The sight, muscle and kinetic-static senses are entirely responsible for perfect equilibriation, and of the three the last named is the most important. There is a direct connection between these three senses. In any case of

vertigo ear tests should be made; the same is true of nystagmus. This ear and brain work will, for a time at least, be done by the neurologist, the aurist, and, possibly, by the general practitioner.

In this book an exhaustive study of the physiology and anatomy of cerebral localization is given; also an extensive study of nystagmus.

The text is very clear, making this ordinarily considered difficult subject, very easy and a pleasure to read. It is also well illustrated.

The book is well printed, and is a great contribution to medical literature, and should be in the hands of every medical man. —KERRICK.

MISCELLANY

TENTATIVE PROGRAM of MINNEAPOLIS CLINIC WEEK May 6, 7, 8, and 9

The programs of the four afternoon symposiums are practically complete; but some parts of the programs of the forenoon clinics cannot be completed until the day before the clinics are given, and this information, therefore, must be obtained from the bulletins, to be published during the meeting of the Clinic.

AFTERNOON SYMPOSIUMS

TUESDAY—INFLUENZA AND ITS PNEUMONIAS

Dr. Henry L. Ulrich, Chairman

1. Pathology, with Demonstration. By Dr. H. E. Robertson.
2. Symptomatology. By Dr. T. A. Peppard.
3. Bacteriology. By Dr. W. P. Larson.
4. Treatment. By Dr. E. L. Gardner.
5. Empyemas. By Dr. A. A. Law.
6. Surgery. By Dr. A. T. Mann.
7. Neurology. By Dr. C. E. Nixon.
8. Head Complications. By Dr. J. D. Lewis.

WEDNESDAY—HEART AFFECTIONS

Dr. J. G. Cross, Chairman

1. Heart Affections: Auricular Fibrillation; Auricular Flutter; Clinical Recognition and Treatment. By Dr. J. E. Hines.
2. Angina Pectoris and Chronic Myocarditis: Diagnosis and Treatment. By Dr. J. W. Bell.
3. Heart Affections in the Child. By Dr. F. C. Rodda.
4. Surgery of the Heart and Pericardium. By Dr. J. Warren Little.
5. Selected Demonstrations in Heart Pathology. By Dr. H. E. Robertson.

THURSDAY—SYPHILIS

Dr. S. E. Sweitzer, Chairman

1. Syphilis from a Public Health Standpoint. By Dr. H. G. Irvine.
2. Pathology of Syphilis. By Dr. E. T. Bell.
3. The Importance of Early Diagnosis and Treatment of Syphilis. By Dr. John Butler.
4. Tertiary Syphilis of Internal Organs. By Dr. J. P. Schneider.
5. Genito-urinary Syphilis. By Dr. F. R. Wright.
6. Differential Diagnosis of Nervous Syphilis. By Dr. W. A. Jones.
7. Treatment of Neurosyphilis. By Dr. Angus Morrison.

Discussion opened by Dr. G. M. Olson and Dr. H. E. Michelson.

FRIDAY—FOCAL INFECTION

Dr. S. Marx White, Chairman

1. Factors to be Considered in the Conservation or Extraction of Infected Teeth. By Dr. T. B. Hartzell.
2. The Relation of Peribronchial Infection to Other Foci (Demonstrations). By Dr. F. S. Bissell.
3. Focal Infections as Related to the Eye. By Dr. Douglas F. Wood.
4. Focal Infections Related to Suppuration in the Nose and Throat. By Dr. E. H. Parker.
5. A Further Reason for the Reduction of Focal Infection. Dr. H. L. Ulrich.

CLINICS AT HOSPITALS

Practically all the hospitals in the city will give both surgical and medical clinics in the forenoons of the week. As it cannot be known long in advance of the date of a clinic what cases will be available for such clinic, a program cannot be issued much before the preceding day.

The following data are only suggestive of the work to be done in the different hospitals.

ABBOTT HOSPITAL

Dr. A. W. Abbott—Abdominal Surgery.
Dr. J. P. Sedgwick—Pediatrics.
Dr. Arthur C. Strachauer—General Surgery.

CITY HOSPITAL

Dr. Frank Wright—Genito-urinary Surgery.
Dr. Arthur Mann—General Surgery.
Dr. A. H. Parks and Staff—General Surgery.
Dr. A. E. Benjamin and Staff—Gynecological Work.
Dr. Arthur E. Smith—Eye, Ear, Nose, and Throat Surgery.
Dr. H. L. Ulrich—Medical Clinics.
Dr. John E. Hynes—Medical Clinics.
Dr. T. A. Peppard—Medical Clinics.
Dr. E. L. Gardner—Medical Clinics.
Dr. H. L. Staples—Medical Clinics.
Dr. Charles Brooks—Medical Clinics.
Dr. H. L. Knight—Gastro-enterostomy.
Dr. W. A. Jones—Methods of Diagnosis of Nervous and Mental Diseases.
Dr. Julius Johnson—Nervous and Mental Diseases.
Dr. C. E. Nixon—Nervous and Mental Diseases.
Dr. L. O. Dart—Contagious Diseases.
Dr. Glenn Matchan—Contagious Diseases.
Dr. E. J. Huenekens—Pediatrics.
Dr. J. H. Simons—Gynecology and Obstetrics.
Dr. J. D. Lewis—Eye, Ear, Nose, and Throat Clinics.
Dr. C. O. Maland—Gas Anesthesia in Parturition.

EITEL HOSPITAL

Dr. George G. Eitel—General Surgery.
Dr. Emil Geist—Orthopedics.
Dr. C. N. Spratt—Eye, Ear, Nose, and Throat.
Dr. Justus Matthews—Ear, Nose, and Throat.
Dr. Emil Robishek—General Surgery.
Dr. H. L. Ulrich—Medical Clinics.

FAIRVIEW HOSPITAL

TUESDAY—Dr. N. H. Scheldrup—Surgical Work.
WEDNESDAY—Dr. H. L. Williams—(1) Sequelæ of Cerebrospinal Meningitis; (2) Tuberculer Abscess of Hip Simulating Sciatic Rheumatism.
Dr. Thorwald Peterson—A Protracted Case of Ulcerated Colitis; Pott's Disease, with Paralysis of Both Legs.
THURSDAY—Dr. N. H. Scheldrup—Surgical Work.
FRIDAY—Dr. L. Bratholdt—Cataract; Tonsillectomy.

HILLCREST HOSPITAL

TUESDAY—General Surgical Clinic.
THURSDAY—Dr. J. W. Little and Dr. A. S. Fleming—Radium Applications: Demonstrations and Results.
FRIDAY—Dr. E. K. Green—Bone Clinic.

NORTHWESTERN HOSPITAL

TUESDAY—Dr. Gustav Schwyzer—Two Thyroidectomies.
Dr. Horace Newhart.
Dr. E. S. Strout—Eye, Nose and Throat.
Dr. Douglas F. Wood—Nose and Throat Surgery.
WEDNESDAY—Dr. F. H. Poppe—Two Ligations for Intrathoracic Exophthalmic Goiter; Excision of Parovarian Cyst.
THURSDAY—Dr. A. E. Benjamin—Four Laparotomies.
Dr. A. T. Mann—General Surgery.

ST. BARNABAS HOSPITAL

Dr. A. E. Benjamin—Abdominal Surgery.
Dr. E. A. Booth—Surgery.
Dr. G. L. Doxey—Nose and Throat.
Dr. F. A. Dunsmoor—General Surgery.
Dr. R. E. Farr—General Surgery.
Dr. Earle R. Hare—Gall-bladder and Goiter.
Dr. H. McI. Morton—Eye Clinics.
Dr. J. F. Schefcik—Eye and Ear.
Dr. J. H. Simons—Abdominal Surgery.
Dr. G. Elmer Strout—Eye, Nose, and Throat.
Dr. H. C. Stuhr—Abdominal Surgery.

SAINT MARY'S HOSPITAL

Dr. H. B. Sweetser—Goiters; Fracture of the Leg from Gun-shot Wound; Sub-cutaneous Cysts; Varicose Veins.
Dr. Arthur Strachauer—General Surgery.
Dr. Nimrod Johnson—General Surgery.
Dr. E. L. Gardner—Medical Clinics.
Dr. Oscar Owre—Cystoscopic Work.
Drs. Wright and Benson—Frontal Sinus (Ingalls); Cataract Cases.

SWEDISH HOSPITAL

GENERAL SURGERY

Dr. C. J. Ringnell—Stomach and Gall-bladder.
Dr. C. M. Kistler—Chest and Abdominal Surgery, with Demonstration of Cases.
Dr. J. H. Rishmiller—Femoral Hernia (local). Fracture of Patella (spinal). Exhibition of Radiographs and Patients—Basial Fracture of Cranium; Fracture of Body of Lumbar Vertebra (2 cases); Fracture of Pelvis with Ruptured Bladder; Fracture of Neck of Scapula; Fracture through Greater and Lesser Trochanter of Femur (2 cases).
Dr. A. E. Johnson—Thyroid Surgery, with Demonstration of Cases.
Dr. E. Moren—General Surgery.
Dr. Theodore Tennyson—Abdominal and Gynecological Surgery.
Dr. O. A. Olson—General Surgery.
Dr. Oscar Owre—Bladder and Kidney Surgery, and Demonstration of Cystoscopic Technic.
Dr. A. Soderlind—General Surgery.
Dr. H. W. Quist and Dr. H. P. Linner—General Surgery.
Dr. Emil S. Geist—Orthopedic Surgery.
Dr. J. G. Ericson—Eye and Ear Surgery.
Dr. E. H. Parker and Dr. Douglas F. Wood—Nose and Throat Surgery.
Dr. A. E. Hedback—Gynecology.
Dr. S. G. Wright—Demonstration of Infections of Antrum of Highmore.
Dr. C. C. Kennedy and Dr. R. R. Kennedy—Gynecological Surgery.

MEDICAL CLINICS

Dr. J. P. Schneider—Pernicious Anemia (3 cases).
Dr. S. P. Rees—Heart Lesions.
Dr. Julius Johnson—Neurological Clinic.
Dr. C. R. Drake—Demonstrations, 8:00 A. M. to 12 M. Laboratory Technic.
Dr. C. A. Donaldson—*X*-ray Demonstration of Gastric Cases.
Dr. Gilbert Seashore—Autopsies and Gross Pathology at County Morgue.

THOMAS HOSPITAL

TUESDAY—Dr. F. Hacking—Pulmonary Tuberculosis.
THURSDAY—Dr. F. Hacking—Pulmonary Tuberculosis.

UNIVERSITY HOSPITAL

Operative and diagnostic clinics in surgery will be given by the following named members of the Surgical Staff:

Dr. A. C. Strachauer.	Dr. F. R. Wright.
Dr. A. McLaren.	Dr. J. A. Johnson.
Dr. A. A. Law.	Dr. F. H. Poppe.
Dr. H. P. Ritchie.	Dr. F. A. Olson.

Clinics and case-demonstrations will also be given by the following named members of the Medical Staff:

Dr. L. G. Rowntree.	Dr. A. W. Morrison.
Dr. S. M. White.	Dr. J. A. Lepak.
Dr. R. I. Rizer.	Dr. C. E. Nixon.

NEWS ITEMS

MINNEAPOLIS CLINIC WEEK

Our readers are warned against making a mistake as to the dates of the forthcoming Minneapolis Clinic Week, which are May 6, 7, 8 and 9 (Tuesday, Wednesday, Thursday and Friday).

As the clinics at the different hospitals will begin early Tuesday morning (May 6), and as the Tuesday afternoon symposium will be an interesting one, visiting doctors should plan, when possible, to be in the city either Monday night or early Tuesday morning, and should go at once to headquarters, where they can register and obtain admission cards to such clinics as they desire to visit. As most operating-rooms are of limited capacity, the card system of admission for visitors is unavoidable.

HELP THE BOYS COMING HOME

Many physicians now returning from army service are seeking new locations or positions as assistants, associates, etc. To assist these men a bureau of information will be maintained by the Executive Committee in charge of Clinic Week, and all visiting physicians are urged to join in the work of finding places for both the returning medical men and all other physicians in need of work.

Laboratory technicians, secretaries, and other office help, as well as physicians, may be obtained through the bureau without charge.

Inquire at the general information bureau at the Radisson.

The new St. Olaf's Hospital building at Austin is nearly completed.

Dr. E. M. Young has moved from Plankinton, S. D., to Mitchell, S. D.

Dr. G. F. Pugh has moved from Stratford S. D., to Florence, S. D.

Dr. W. L. Vercoe will resume practice this month in Deadwood, S. D.

Dr. Blake Lancester has moved from Crosby, N. D., to Sherwood, N. D.

The City Hospital of Minneapolis graduated twenty-six nurses last month.

Dr. M. Sullivan has moved from Adrian to Minneapolis, and has offices at 4500 Zenith Ave. South.

Minneapolis health organizations have given up Health Week for this year.

Dr. Kenneth Taylor, it is reported, has been promoted to the rank of Major.

Dr. Alexander D. MacDonald, of Galen, Mont., died last month at the age of 58.

Dr. C. A. Wicklund has moved from Cottonwood Lake, N. D., to Wildrose, N. D.

The South Dakota State Medical Association holds its annual meeting on May 21 and 22.

The North Dakota State Nurses' Association held its annual meeting at Fargo last week.

Dr. L. T. Flake, of Elk River, has moved to Minneapolis, with offices at 3453 Hennepin Ave.

North Dakota is to spend $150,000 for a new building for the State Hospital for Insane at Jamestown.

Dr. C. G. Tilden, of Ames, Iowa, is substituting for two or three months for Dr. Vanstrom, of Gary, S. D.

The North Dakota State Board of Nurse Examiners will hold an examination in Grand Forks on May 6 and 7.

Dr. C. N. Brooks, formerly of Conde, S. D., has located in Summit, S. D., since his return from army service.

The Mounds Park Sanitarium, of St. Paul, graduated eighteen nurses last week with appropriate exercises.

Dr. S. H. Olson, formerly of Milaca, who had planned to locate in Austin, has gone to Colorado Springs, Colo., for recuperation.

The Lutheran Hospital of Mankato is to be enlarged. Necessary expenditure for an addition 35x40 is estimated to be $35,000.

Drs. James McKeon and Son, of Montgomery, have purchased a large residence building, which they will remodel and use as a hospital.

Dr. Minor Morris, formerly of Hopkins, has returned from military service, and is now associated with Dr. H. A. Copsey, Alliance, Neb.

Dr. R. E. Betchel has resigned from the staff of the More Hospital, of Eveleth, and gone to Chicago, where he will enter private practice.

Capt. G. G. Cottam, who has been chief of surgical service B. H. No. 88 at Savenay, France, is, or soon will be, at home in Sioux Falls, S. D.

Dr. Gilbert Hendrickson, formerly of Lewis, Minn., has located in Enderlin, N. D., and become associated with Dr. L. H. Labbitt, of that place.

The contest over the will of a deceased citizen of Northfield has been decided in favor of the city, which will receive $40,000 for hospital purposes.

St. Luke's Hospital, of Aberdeen, S. D., is to be enlarged by an addition that will cost about $100,000. St. Luke's is conducted by the Catholic Sisters.

The City of Stillwater and the County of Washington have been authorized to take over the only private hospital in Stillwater, and to conduct a public hospital.

Dr. F. W. Burns, formerly of Montevideo, will locate in St. Paul. Dr. Burns did extensive work in bone-grafting during his army service, mostly at Ellington Field, Texas.

Dr. John Watson, of Minneapolis, who gave up active practice a year or so ago, has taken charge of the practice of Dr. J. C. Jensen, of Hendricks, who is taking a vacation.

The Board of Health of Alexandria, Minn., has ordered a clean-up in that village, which, if carried out, will remove many causes of disease. Why do not all villages and cities do likewise?

Dr. Charles Keane, the energetic health officer of the Minneapolis Board of Health, has returned from army service, and is vigorously at work with school sanitation and health measures.

The Union Hospital of New Ulm can no longer take care of its patients in its limited quarters. A new hospital building and a nurses' home are to be built as soon as funds are available.

A card-record system will probably be introduced into the schools of Duluth for the purpose of showing the daily health conditions of every pupil. "Will probably not be," if the "Scientists" object.

The Woman's Auxiliary of the South Dakota State Medical Association will entertain the wives of visiting physicians at Lake Kampeska, Watertown's summer resort, and they will do it handsomely.

The Dickinson Sanitarium, of Dickinson, N. D., feels the need of a larger building, and plans are under way for a new building. The sanitarium has been incorporated with a capital stock of $25,000.

Winona is to have a detention hospital for contagious diseases. Other cities in the state talk much about such hospitals, but public opinion cannot be aroused sufficiently to get the necessary appropriations.

The first woman ever appointed on the faculty of Harvard University is Dr. Alice Hamilton, of Chicago. Dr. Hamilton is fifty years of age, and has studied in the principal medical centers of Europe and America.

The new hospital at Proctor has been completed. Its staff consists of Dr. E. E. Webber, formerly of Chisholm; Dr. J. A. Rippert, also formerly of Chisholm; and Dr. Robert Guilmette, formerly of Minneapolis, and recently in army service in England.

The date of the annual meeting of the North Dakota Medical Association has been changed from June 18 and 19 to June 24 and 25, on account of another convention to be held in Grand Forks on the former dates.

A work entitled "Operations of Obstetrics," by Dr. Frederick Leavitt, of St. Paul, the long-time secretary of the Minnesota Academy of Medicine, has just been issued by the Mosby Company of St. Louis, Mo.

The Academy of Ophthalmology and Oto-Laryngology will hold its annual banquet during Clinic Week, and expects to have a speaker of note. Outsiders attending Clinic Week are cordially invited to the banquet.

The country papers of Minnesota with few exceptions, have taken note of the attacks upon Dr. Bracken by Dr. Hill, and in their editorials, especially, they condemn the attack and praise Dr. Bracken for his efficiency.

Dr. H. W. Newkirk, who recently returned to Minneapolis from war service, has taken up his juvenile remedial work in connection with the juvenile court, and will make an intensive study of children under army methods.

Capt. Otto J. Seifert, of New Ulm, it was recently reported, has been promoted to the rank of major. Major Seifert entered the Medical Reserve Corps in 1917, and has been attached to Hospital Train No. 58 in France.

Dr. Charles E. Smith, Jr., assistant secretary of the Minnesota State Board of Health, has been appointed Minnesota representative of the Government health department to pass upon medical questions arising in war risk insurance.

The Cokato Hospital has been closed on account of a lack of funds. The current prices of labor and food have made it very difficult for hospitals to make expenses, and many of them will yet fail unless the public come to their help.

A "hospital week" will probably be held in Minneapolis in June, and it is rumored that ex-

pert hospital examiners will show that only two hospitals in the city are conducted on right lines. The truth about our hospitals will be welcomed, but snap judgments are not wanted.

The firm of physicians and surgeons formerly known as Drs. Giere, Johnson, Koren & Magee, of Watertown, S. D., has now adopted the name of "The Watertown Clinic." The firm's business in the future will be carried on under that name.

Dr. C. J. McGurren, secretary of the North Dakota State Board of Health, assisted by Dr. F. R. Smyth, of Bismarck, will establish four clinics in that state for dealing with venereal diseases. They will be held at Fargo, Bismarck, Grand Forks, and Minot.

Major Dehelly, surgeon-in-chief of the hospital at Comtiegne, France, has been sent to the United States to address medical men on the treatment of infection in wounds as practiced in the French army. He spoke before the Hennepin County Medical Society on April 9.

Dr. J. C. Litzenberg, president of the Hennepin County (Minneapolis) Medical Society, recently sent a letter to the Minnesota Senate, informing the health committee of that body that the physicians of Minneapolis at least will no longer attempt to influence state health legislation.

Grand Forks, N. D., has opened a free dispensary at the University Community for Children. It will be open Saturday afternoons, when the city physician and two nurses will be present. A volunteer motor corps will furnish the necessary transportation for the children and their mothers.

Alpha Omega Alpha, the honorary medical fraternity of the State University, held its annual banquet for initiation of members at the Minneapolis Club last week. Drs. S. M. White, T. H. Dickson, E. P. Lyon, Bernard Gallagher, H. E. Robertson, and S. F. Herrmann responded to toasts.

Dr. Major Seelig, of St. Louis, Mo., is to be the speaker at the Hennepin County Society's annual banquet on Thursday night, May 8, during Clinic Week at Minneapolis. Dr. Seelig was attached to the Surgeon General's Office during the war. His subject will be "Medical Education in the War."

In addition to the two members of the Minnesota State Board of Health, mention of whom is made in another item, Capt. Chelsea C. Pratt, formerly in charge of the Branch Laboratory at Mankato, has been highly commended for his work in France, and has now been appointed public-health expert with the Montenegrin American Red Cross.

The Minnesota Senate last week passed a resolution asking Dr. H. M. Bracken to resign his position as Executive Officer of the State Board of Health after twenty-five or more years of efficient service, and did so without a charge against him. Such an act is outrageous, indeed, disgraceful. It comes from men without a particle of sense of decency or justice.

An attempt to establish a clinic in Winona for the free treatment of the needy received little encouragement from the County Medical Society. The physicians of the city prefer to do free work in their offices, as they have always done. The problem of treating the needy is a big one, and it has been so handled by the medical profession as to give rise to the saying that the poor and the rich get the best services of the profession.

Dr. Gustav A. Renz, of St. Paul, died on April 13 at the age of 58. Dr. Renz had been prominent in Minnesota medical circles for over twenty years. He was a graduate of the University of Pennsylvania, and had served the city of St. Paul for many years as chief and assistant health officer. He was at one time on the faculty of the Medical School of the University, and had been president of the Ramsey County Medical Society.

Dr. William Asbury Hall, of Minneapolis, died on April 12, at the age of 67. Dr. Hall was a graduate of Albany Medical College, and came to Minneapolis in 1877, where he practiced until his health broke down, in 1914. He became a member of the faculty of the University Medical School soon after coming to the city. He had been president of the Hennepin County Medcal Society and the State Medical Association, and had been on the staffs of several Minneapolis hospitals.

Dr. A. J. Chesley, of Minneapolis, Director of the Division of Preventable Diseases, of the State Board of Health, who has been in France with the Red Cross since June, 1918, has been signally honored by appointment to help organize the public-health work of Poland, with headquarters at Warsaw. As epidemics of typhus and smallpox prevail in Poland, the work is exceedingly important, and no one is better fitted to handle it than Dr. (now Major, we believe) Chesley, whose leave of absence has been ex-

tended to October. Capt. Bruce M. Mohler, chemist of the State Board of Health, will be associated with Dr. Chesley as water supply expert. Capt. Mohler's work has been highly commended, and he has been recommended for promotion.

NOTICE TO TWIN CITY PHYSICIANS

The Physicians' Exchange will be continued by Mrs. Christianson, assisted by her son, a University student. All members of the Exchange will have their names inserted free in the telephone directories if sent in by May 15.

LOCUM TENENS WANTED

A South Dakota physician wants a doctor to take charge of his work for the month of June. Please state your qualifications and experience. Address 236, care of this office.

SANATORIUM FOR SALE

The prettiest and best-paying sanatorium in the Northwest. Hitherto devoted to hydropathic treatment. Always full of patients. Best reason for selling. Located at Plymouth and Penn Aves. North, Minneapolis. Tel. Hyland 152.

LABORATORY TECHNICIAN DESIRES POSITION

Has had a college training in laboratory work, and experience in charge of the laboratory of a leading firm of physicians, whose work requires a wide range of laboratory determination. Address 224, care of this office.

LOCUM TENENS WANTED

For three or four months with view to assistantship or partnership. Must have diploma and be able to register in South Dakota. Large field and plenty of work for two doctors. Will need him by or before the first or the middle of May. Address Dr. E. N Wagar, Bijou Hills, South Dakota.

WANT AN ASSISTANTSHIP LEADING TO A PARTNERSHIP

By a married man, aged 32, graduate of Jefferson, Class of '10. Has done general practice with some surgery. Army experience with British expeditionary force. Best of references. Prefer a hospital town with a man doing some surgery. Address 231, care of this office.

PRACTICE FOR SALE

A $4,500 practice in a good town of 1,200 population in southeastern part of South Dakota. One of the best locations in the state. Practice can easily be increased. Price, $750 cash. Equipment will almost invoice that amount. Good fees, good roads, good schools, live business house, etc. Residence and auto optional. Two railroads. Am leaving state and going out of practice. Address 228, care of this office.

PHYSICIAN WANTED

In a new town, 55 miles northeast of St. Paul in Wisconsin, in a very thickly settled country. Nearest physicians 8 miles east and 12 miles west. For particulars address 225, care of this office.

LABORATORY TECHNICIAN AND *X*-RAY OPERAOR WANTED

A firm of surgeons in one of the large cities of South Dakota wants a technician who can do all kinds of laboratory work, including Wassermanns, etc., and *x*-ray work. State what experience you have had, and also salary desired. Address 235, care of this office.

POSITION AS LABORATORY TECHNICIAN WANTED

By a young woman with splendid educational background and eighteen months' experience in a large clinical laboratory; capable of doing complete urinalysis, blood counts, blood chemistries, sputa, gastrics, bacteriological examinations, frozen and parafin sections, and Wassermanns. Address 230, care of this office.

PHYSICIANS' PRESCRIPTION BOTTLES FOR SALE

French square 8-ounce bottles, packed in 1½-gross cases, at $5.50 per gross or $8.25 per case. In 5-case lots, 5 per cent discount; in 10-case lots, 10 per cent discount. We also have a few gross each of 2-, 3-, 4-, 8-, and 16-ounce round and square prescriptions. Prices quoted on any size or quantity wanted. Address Wm. Painter Company, 1417 Washington Ave. S., Minneapolis.

INSTRUMENTS, BOOKS AND FURNITURE FOR SALE

The instruments, books, and some furniture of the late Dr. Renz, of St. Paul, are offered for sale. The instruments are, in the main, the smaller ones. They are plated with German silver, and are in excellent condition. The books are largely standard German texts of large value. They may be seen by calling up Dr. John V. O'Connor, Lowry Building, St. Paul.

A MONTANA VILLAGE WANTS A PHYSICIAN

Rudyard, Mont., a town of 300, seven years old, with a rich farming territory 35 miles south and 40 miles north, wants a physician. Town has two banks, two hotels, several stores, garage, livery stable, etc. Has electric lights. Is on the main line of the Great Northern. Farmers are thrifty Germans, Russians, and other nationalities. Further information will be given by E. A. Hawkins, pharmacist, Rudyard, Mont.

PRACTICE FOR SALE

In a prosperous Minnesota town of 500, people of German descent predominating. On the main line of the Northwestern Railway and the terminal of a branch line. Competition from other towns not great. Town has electric lights and water system, and on a federal road. Good schools. Have a small six-room house, two autos, and good office equipment, and autos are optional. Business is good and can be increased; collections, excellent. Good reasons for leaving. Price, moderate. Address 234, care of this office.

PUBLISHER'S DEPARTMENT

HILLCREST SURGICAL HOSPITAL OF MINNEAPOLIS

Hillcrest Hospital has been in operation for ten years and now has a capacity of 60 beds. It has been a success from its opening day, because it has had the utmost confidence of the medical profession. Permanent success in the management of a hospital is gained in no other way.

Hillcrest Hospital has been employing, for several years past, radium in conjunction with surgery. This work is done under the direction of Dr. A. S. Fleming in association with Dr. Little, and the results have been exceedingly satisfactory. Some of the results of radium treatment are set forth in this issue of THE JOURNAL-LANCET in a symposium recently presented before the Hennepin County Medical Society. It is, indeed, fortunate for the profession and the public that an institution so reliable as Hillcrest is now in possession of enough radium for use in the treatment of any disease for which it is indicated, and also that not the least element of quackery surrounds its use by such men as those upon the staff of this hospital.

SHERMAN'S BACTERIAL VACCINES

It is none too early to call attention to the use of the bacterial vaccines for hay fever. No doubt many physicians have given but little attention to the value of such treatment in any disease; and upon such men we strongly urge a study of the literature of the vaccines. Dr. G. H. Sherman, of Detroit, Mich., will cheerfully furnish such literature. He is a recognized authority on the subject, and is a manufacturer of all the vaccines, and is a man of high standing in the estimation of medical men throughout the country.

Address G. H. Sherman, M. D., Detroit, Mich.

SALVARSAN AND NEOSALVARSAN

The unprecedented demand for salvarsan and neosalvarsan has led so many firms to manufacture them that the physician needs to be cautious about prescribing either of them when made by a house whose reputation is not established.

There can be no risk when using the product of the H. A. Metz Laboratories, of New York, for their products are as staple as any pharmaceutical made.

The Metz Laboratories can now supply novocain in both powder form and tablets and in any quantities required.

Their products are sold by all druggists.

SPENCER REJUVENO CORSETS

The Glaze Corset Shop, 236 La Salle Building, conducted by Mrs. Glaze, has served the medical men of Minneapolis in filling their orders for special corsets for patients so acceptably that they do not hesitate to depend upon the shop to fit corsets that will meet the most exacting demands. Much of this service can rarely be obtained through the mails, although the Spencer corset is made in so many forms that much can be done from measurements made by physicians.

The new illustrated circulars of the Spencer corsets, which can be had of the Glaze Corset Shop, will be of help to physicians whose patients cannot be seen personally by either Mrs. Glaze or one of her assistants.

THE NEW MUDBADEN

The manager, Mr. A. L. Johnson, and the medical director, Dr. F. W. Mackoy, of the "New Mudbaden," at Jordan, Minn., extend a cordial invitation to visit the sanitarium, and become familiar with the treatment given there. The physician who accepts this invitation can spend one or more days pleasantly at Mudbaden, and he himself may get much help from the treatments, especially if he has been overworked this winter.

Mudbaden is a good place for a week's rest and treatment for the tired businessman, even though he is not a sick man.

THE VICTOR CORPORATION

Mr. F. L. Pengelly, sole representative of the Victor Electric Corporation, of Chicago, Cambridge, and New York, who maintains offices and salesrooms at 220 La Salle Building, Minneapolis, has just finished making some radical changes in the arrangement of them.

He is now situated so that a complete course in operating technic may be given to either a physician or a dentist, or to both at the same time.

One room is completely equipped with a modern dental *x*-ray outfit, to operate both the Hydrogen tube, which the Victor Corporation manufactures, and the Coolidge tube, with the autotransformer control.

Another room is completely equipped with one of the latest models of Victor *x*-ray tables, on which every phase of *x*-ray work may be done. Fluoroscopic technic, particularly, will be emphasized. The uses of the Hydrogen tube, Coolidge tube, autotransformer control and the straight resistance control will also be demonstrated in this room.

A modern dark-room is another feature where a perfect working technic can be taught.

Mr. Pengelly has associated with him eight assistants, specially trained in this line of work, so that he is able to take care of a class of thirty or even more at one time.

All are invited to call and inspect the new arrangement.

THE TRI-IODIDES (HENRY'S)

Henry's Tri-Iodides, as the name implies, are recommended for rheumatism, gout, syphilitic blood disorders, eczema, psoriasis, and all dermic disorders.

There is no secrecy about the Tri-Iodides. They are familiar to all medical men, their action being specifically and thoroughly known.

The Henry Pharmacal Co. will send literature and an 8-ounce sample bottle to any physician who will pay the express charges (30 cents). The Company's address is 121 Vine St., St. Louis, Mo.

THE STANDARD MEDICAL SUPPLY COMPANY OF MINNEAPOLIS

At the recent annual meeting of the Standard Medical Supply Company of Minneapolis changes were made that assure progress and greater service to the Company's patrons, now numbered by thousands. Dr. G. W. Olsen, a man noted for very great efficiency as superintendent of one of our largest (the Swedish) hospitals, was elected president; and Dr. R. C. Bryant, who has

been an official of the Company since its organization, was made general manager. This, indeed, is a strong, aggressive, and wise combination, for Dr. Olsen knows the hospital business from the ground up, and Dr. Bryant knows, no less thoroughly, the manufacturing and selling end of the business.

The *Standard* will make good its name in every department; yes, in every article made or sold by it; and in the promptness of its service and the prices it charges.

The Company will make an interesting and large exhibit at the Radisson during Minneapolis Clinic Week.

CELLOSILK

Cellosilk is not merely an economical substitute for oiled silks and rubber tissues, but, in many respects, it is more efficient and more satisfactory wherever used as a surigcal dressing or as a drain. It is readily sterilized, is transparent, is water-proof, is very flexible, and, best of all, is non-adherent. A single trial of it will demonstrate its good qualities, and it will never disappoint the surgeon in any respect.

Cellosilk is manufactured by the Marshalltown (Iowa) Laboratories, and is put up in 12-foot rolls either 4, 9 or 18 inches wide, and sells for 75 cents, $1.00 and $2.00 a roll, according to width.

PREPARING PERFECT SURGICAL GUT

The series of several explanatory notes on the preparation of a perfect surgical gut, which have appeared in our advertising columns, show what infinite pains under the most favorable conditions are taken to make "tubes of distinction,"—that is, tubes of surgical gut that will never disappoint the surgeon in any respect. No other gut should be tolerated for one moment in a surgeon's office.

It is highly creditable to the Hollister-Wilson Laboratories that they have recognized the need of making an absolutely perfect surgical gut, and that they bring to its manufacture all the mechanical and scientific ability of their great house.

COORS MALTED MILK

Coors Malted Milk is a new product, and is offered to the profession with distinctive claims well worth considering.

It is manufactured by the oldest and one of the wealthiest maltsters of America, Mr. Coors, of Denver, Colo., the place of manufacture being in the foot-hills of the Rocky Mountains at Golden, Colo., where conditions as to milk production and manufacture are, indeed, ideal.

The special points of excellence and superiority claimed for this product are as follows:

1. It is a rich, delicious food beverage, free from any unpleasant or sickening after-taste.

2. It contains no starch, and thus does not disturb the stomachs of the young or of invalids who cannot digest starch.

3. As to the mineral salts (of the grains) it is a balanced ration for young children deprived of mother's milk by sickness or after the natural nursing period.

4. It is concentrated in a manner to make it readily soluble in milk or water.

5. It is a delicious beverage, and is now served at very many soda-fountains.

It will be exhibited and samples will be given out during Minneapolis Clinic Week.

Minneapolis office of the Company, 322 Plymouth Building, Minneapolis.

SUIT DISMISSED COMPLAINT THE VICTOR CORPORATION

At a regular session of the United States Federal Trade Commission held in Washington, D. C., March 10, 1919, the complaint against the Victor Electric Corporation was ordered dismissed and discontinued. We congratulate the officers and members of the Victor organization on this vindication.

The personnel of the Victor organization is largely made up of pioneer workers in the *x*-ray and physical therapy field and we have always believed that these men (who are directing the policies of the Victor Electric Corporation), have been actuated by a desire to elevate rather than to lower the standard of business ethics in their field.

The Victor Corporation is to be congratulated upon having had this opportunity of having the Government searchlight turned upon its activities, and the clean bill of health which the Corporation has received should be an inspiration to its officers to continue to be guided by those ideals which should be kept in constant view by all who are engaged in an industry so closely allied to medical science.

NOYES BROS. & CUTLER—AN INVITATION

Messrs. Noyes Bros. & Cutler will make an attractive exhibit at the Radisson during Minneapolis Clinic Week, and they invite all visitors to inspect this exhibit and also to drop into their Minneapolis sales-rooms at the corner of Sixth St. and Marquette Ave., where a very extensive line of apparatus can be seen. It is at such places that one picks up valuable information about the newer apparatus and instruments helpful to both physicians and surgeons and hospital superintendents.

The visitor will always receive a warm welcome when calling on this firm.

THE POTTENGER SANATORIUM

Surely, no tuberculosis sanatorium in America is more beautifully and more advantageously situated, or more thoroughly equipped as to appliances, laboratories, etc., or has a staff of better men, than the Pottenger Sanatorium, located at Monrovia, California, a short ride from Los Angeles in the foot-hills, where an ideal climate is found the year round.

The Sanatorium has an office in Los Angeles (in the Title Insurance Building); and it is well worth the while of men going to Los Angeles to consult the Drs. Pottenger for examination and advice.

THE
JOURNAL-LANCET

Represents the Medical Profession of
Minnesota, North Dakota, South Dakota, and Montana
The Official Journal of the
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PAPILLARY TUMORS OF THE PELVIS OF THE KIDNEY*

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Papillary tumors are seldom found in the pelvis of the kidney or in the ureters, although they are common among lesions of the bladder. Israel reported only two cases of papilloma of the pelvis of the kidney among sixty-eight cases of renal tumors. Watson and Cunningham found only one such lesion diagnosed among ninety-four cases of renal and perirenal tumors collected at the Boston hospitals during a period of ten years. Albarran found forty-two cases of pelvic renal tumor reported in the literature up to 1900. Eighteen of these were papillomas; six had invaded the ureter; four of the six extended also to the bladder. Suter reports having found a solitary papilloma in the lower end of one ureter which had caused very profuse hemorrhages. The kidney and bladder were explored, but bleeding from the ureter continued after the kidney was removed; the lesion was not discovered until the ureter was removed. Battle describes a case of calculus in the kidney and papilloma in the renal pelvis. After the extraction of the stone and conservative removal of the tumor, the growth recurred, and a nephrectomy was performed. Lower reports a case of malignant papilloma of the pelvis of the kidney with transplantation into the ureter and bladder, which is apparently very similar to the case I shall report.

The genesis of papilloma of the kidney is not clear. Stones occur in the pelvis of the kidney in about 15 per cent of the cases, and these have been suggested as a possible etiologic factor. The papillary structure is regarded as proliferating epithelium of the renal pelvis, and the exact nature of the tumor seems to be based on the appearance of the epithelial cells within the connective tissue beneath the tumor. The presence of these cells as a distinguishing feature has been questioned by those who contend that epithelial cells are normally present in the form of glands in this tissue. Morogna recently reported two cases of renal pelvic tumors, and gave a detailed study of the histology with a very complete review of the possible etiologic factors suggested by other authors and by himself. He believes that it is possible, though not demonstrable since thus far it has not been proved that the tumors develop by metaplastic evolution; and he believes that the formation of papillomas of the renal pelvis may be explained by the occurrence of aberrant ectodermal inclusions during the period of development, excited to proliferation by an inflammatory process.

Papillary tumors of the pelvis of the kidney are unlike the papillary adenomas that occur in the parenchyma of the kidney, as the pelvic tumor does not invade the kidney substance at any point; its growth and extension is in the pelvis itself, and it has a tendency to pass down the ureter. The papillary adenomas originate from the epithelial cells of the parenchyma, while the squamous-cell papillomas start from the epithelium of the pelvis of the kidney. The latter may be compared with the intracanalicular papillomas that

*Presented before the Minnesota Academy of Medicine, February, 1919.

occur in the ducts of the mammary gland, while the former may be compared with the cystadenomas that occur in the breast. Papillary tumors of the pelvis of the kidney are usually, if not always, multiple. These neoplasms may be divided into three classes: (1) the simple papillomas which show throughout their entire development and evolution the characteristics of all such tumors; (2) the epithelial papillomas which almost immediately show the characteristics of malignancy; and (3) those tumors which apparently change from a supposedly benign to a malignant growth. The same question arises with regard to the features distinguishing these benign and malignant papillomas as arises with regard to papillomas of the bladder. For practical purposes it would seem best to credit malignant tendencies to all of these papillomas, and treat them in a more or less radical manner.

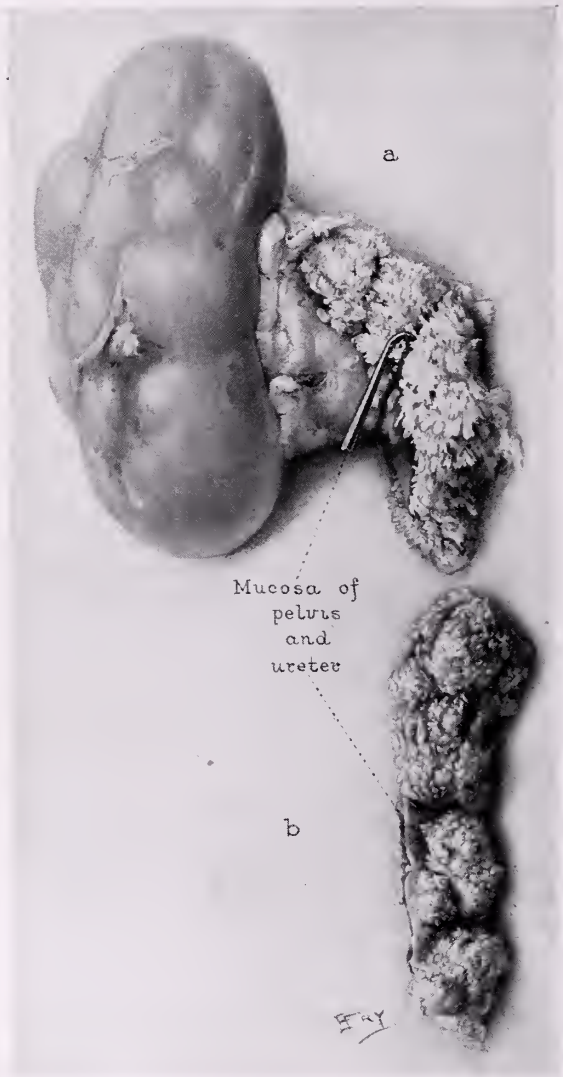

Fig. 1 (212016) a. Kidney with pelvis and upper segment of ureter. The incision has been made in the pelvis and the papillomas forced outward. b. Lower end of ureter with multiple papillomas, which probably extend downward into the bladder.

The particular case of squamous-cell papillary tumor of the renal pelvis which I shall report occurred in a priest fifty-five years of age. In nearly all of the reported cases the condition has occurred in men past forty-five. This patient consulted us in October, 1917. His chief complaint was hematuria. He had considered himself well until January, 1917, at which time he first noticed blood in the urine. The amount of blood was not great at any time, although it had persisted continuously since he first noticed it. He had no pain or irritability of the bladder, and there had been no difficulty in voiding, but there was some trouble in retaining the urine. He mentioned having a slight frequency of urination, which caused him to get up once or twice at night. Two or three cystoscopic examinations had been made elsewhere, and the patient had

Fig. 2 (212016). The open kidney and the exposed papillomas rising from the mucous membrane of the pelvis.

been told that the left ureter was obstructed, that the blood in the urine was coming from the left side, and that the left kidney was functionally impaired.

In reviewing the records of this case of papillary tumor of the pelvis of the kidney, I also briefly reviewed our records of other tumors of the kidney. While Case 1 was found to be the only instance of definite papilloma of the kidney and ureter in the entire series of 207 cases of tumor of the kidney, in one other case (Case 2) the tumor had so completely destroyed the kidney that it was difficult to determine just where the

CASES

Case 1 (212016).—The patient was large and obese. A specimen of urine showed considerable blood. An estimate of the kidney function showed a 40 per cent phenolsulphonephthalein output in two hours, and 22mg. of blood urea to 100 c.c. All the urine came from the right side. A diagnosis was made of surgical left kidney containing a tumor, or of a polycystic condition.

Operation, November 7, 1917: A left anterior abdominal incision was made for the purpose of general exploration, but this revealed nothing of a pathologic nature in the abdomen. The right kidney seemed normal. A tumor could be palpated in the pelvis of the left kidney. The abdominal incision was extended laterally, and the left kidney and four inches of the left ureter were removed. The kidney proved to be about normal

Fig. 3 (212016). Photograph of papillary squamous-cell tumor of the pelvis of the kidney (closed).

Fig. 4 (212016). Same as Figure 3, pelvis of the kidney open.

lesion had originated. Dr. A. C. Broders, who made a histologic study of the cases in this series, believes that the second case should also be classified as a squamous-cell papillary tumor of the pelvis of the kidney. The statistics in the literature and those in our own records emphasize the fact that papillary tumors of the pelvis of the kidney are rare forms of renal tumors. They should, nevertheless, be borne in mind in the examination of such cases, particularly when a papilloma presents itself at the ureteral meatus.*

in size, except that the pelvis and the upper end of the ureter were much dilated. The pelvis of the kidney was about four inches in length and more than two inches in depth and breadth. A soft tumor could readily be palpated in the dilated pelvis and ureter. The dilatation in the ureter extended down more than two inches, and then the ureter abruptly became normal in size and appearance. A nephrectomy was done, and the diseased portion of the ureter, with more than two inches of normal ureter, was removed; the distal end was ligated and allowed to drop back into the wound. On opening the kidney pelvis and the ureter, a large papilloma was found. The capsule, cortex, and paren-

*Since this paper was written, Dr. C. H. Mayo has operated in a similar case of squamous-cell papillary tumor of the kidney. A papilloma was found presenting at the left ureteral meatus. The growth was rather small, and responded to fulguration treatment. The patient was kept under observation for about three weeks. His bladder appeared to be entirely healed, when he had a severe attack of bleeding; the blood came from the ureter in the area in which the papilloma had been fulgurated. A functional test of the kidneys showed this particular kidney to be almost without function; the work was being done by the other kidney. The left kidney and ureter were removed, revealing a definite papillary tumor of the pelvis of the kidney with involvement of the ureter. This case is of particular interest because of the fact that the patient was only thirty-four years of age, and came to the Clinic with a diagnosis of tumor of the bladder, a condition naturally accountable for all his symptoms. The tumor of the kidney was not discovered until after the condition of the bladder had entirely cleared up.

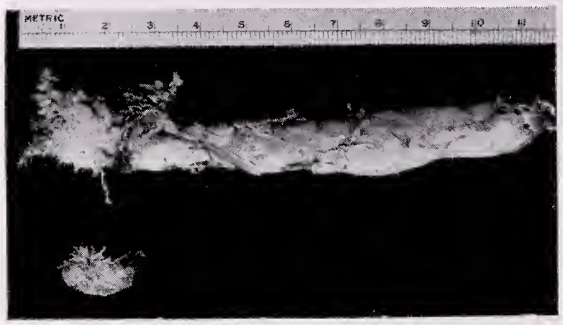

Fig. 5 (212016). Photograph of squamous-cell papillary tumor of the ureter (closed).

chyma of the kidney appeared to be in good condition. Papillary projections of the tumor extended into the dilated calices; they originated from the mucous membrane of the pelvis of the kidney and the upper ureter. The tumor was identical in appearance with the papillomas of the bladder that are so common. (Figs. 1-7).

Histologic examination: The growth was diagnosed as a malignant papilloma. The neoplasm was made up of a proliferation of squamous epithelial cells on fine connective-tissue pedicles. In places the epithelium seemed to break through into the connective-tissue, and show definite malignant tendencies. A large part of the mucous membrane of the pelvis of the kidney was normal. The tumors were on small pedicles and made a mass of considerable size.

The patient made a satisfactory recovery after the operation, and was dismissed in a short time with his wound entirely healed. He returned to his duties, and remained well for about nine months. In August, 1918, he again had trouble and passed a rather large amount of blood in the urine during one urination only. He had no further trouble for three months, when he again began to pass blood and blood clots. This was repeated several times prior to his second examination; the urine always cleared up again, and the patient was well. When he presented himself a second time, the urinalysis was negative with the exception of a few blood cells. Cystoscopic examination showed a cauliflower papillary growth at the site of the left meatus about three-fourths of an inch in diameter. The growth extended almost to the meatus of the urethra; an entirely separate growth was noticed in the trigone.

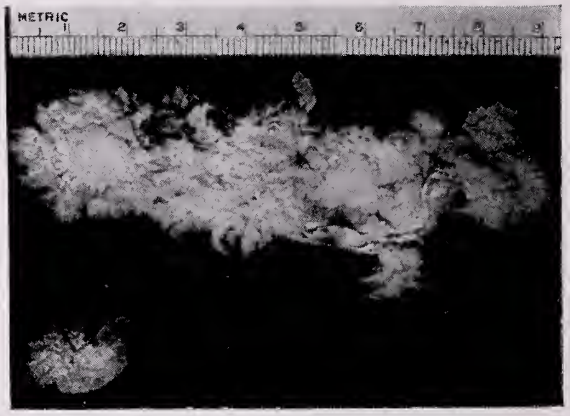

Fig. 6 (212016). Same as Figure 5, ureter open.

January 3, 1919, a second operation was performed. A large extraperitoneal opening was made in the dome of the bladder, and the papillomas were seen bulging from the left ureteral meatus. There was also a separate papilloma, apparently a graft, on the base of the bladder close to the urethra. The tissues in the left prevesical space were separated, and the left ureter, which was several times the normal size and had the feel of a hard cord, was exposed. This was dissected free, and removed en masse from the point at which it had previously been ligated, down to and including the extension into the bladder. A piece of tissue the size of a silver dollar and the entire thickness of the bladder was removed; the small papilloma in the base of the bladder was also exised. The bladder and prevesical space were drained separately. Convalescence was satisfactory, and the wound healed promptly.

Examination of the specimen showed that the ureter was about two-thirds of an inch in diameter, and that the walls were greatly thickened and infiltrated. The growth at the ureteral meatus seemed to extend on to

Fig. 7 (212016). Photomicrograph of squamous-cell papillary tumor of the pelvis of the kidney.

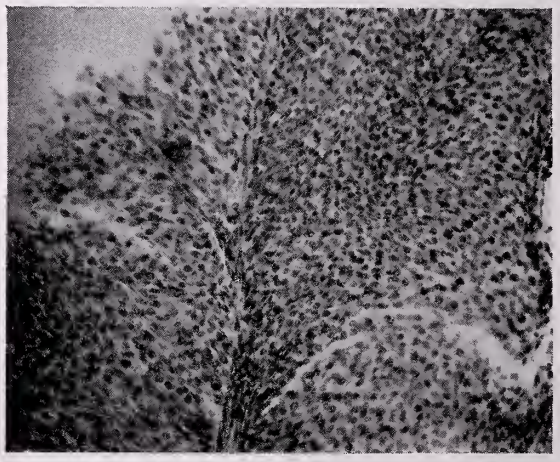

Fig. 8 (235849). Photomicrograph of squamous-cell papillary tumor of the kidney. The tumor is made up of squamous-cells and slender intervening fibrous stalks.

the bladder mucosa so that the greater part of the tumor seen in the bladder was made up of multiple papillomas prolapsing from the ureter. On opening the ureter it was seen to be almost completely filled with a great many separate papillomas, extending all along the mucosa from the point of the former ligation to and including the bladder mucosa. These tumors were identical, both grossly and microsopically, with those removed from the kidney and the ureter more than one year before. The solitary papilloma of the bladder mucosa was of the same structure as those in the kidney and ureter.

The patient is well at the present time, but it is too soon to offer an opinion as to whether or not he will have further trouble. We have advised examinations of the bladder every few months for a period of two years.

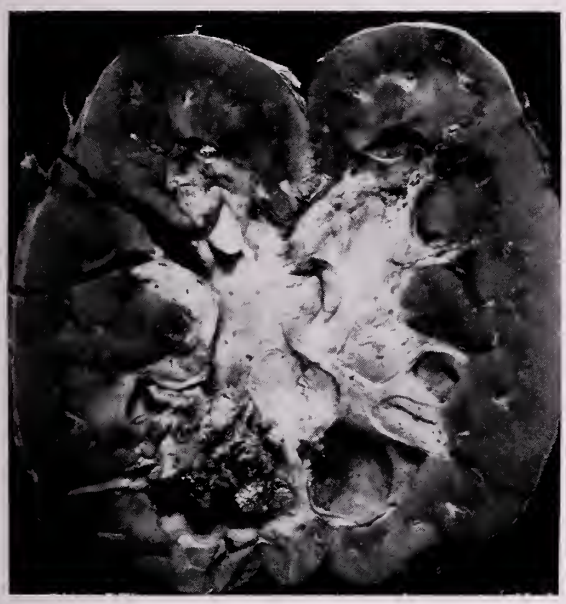

Fig. 9 (103235). Photograph of papillary adenomatous tumor of the parenchyma of the kidney.

Case 2 (235849).—A man, aged 49 years, came for examination complaining of pain in the right lumbar region. For a number of years he had had a great deal of pain in his back, but this pain had disappeared about eight years before, and he had been free from it until one month before when it appeared in the right lumbar region. He urinated from three to four times at night, and every two or three hours during the day. His normal weight was 212 pounds; he now weighed 169.

Examination revealed a large tumor in the right kidney region. The hemoglobin was 56 per cent; leukocytes, 31,800. The urine contained pus and red-blood cells. *X*-ray examination showed multiple shadows in the right-kidney region. A diagnosis of right calcareous pyonephrosis was made. Fifty-five per cent phenolsulphonephthalein was passed in two hours; the function of the right-kidney was about half that of the left.

On July 5, 1918, the patient was operated on. The kidney, containing two stones and weighing 950 gm., was removed. Examination of the specimen showed almost complete destruction of the kidney, a papillary carcinoma 8 cm. in diameter, nephrolithiasis, and three stones in the mass. The patient died on the tenth day after the operation. At necropsy metastatic malignancy in the mediastinal lymph-glands and also in the lungs was found. The malignancy of the glands was of the type found in the kidney.

Histologically, the tumor was of the squamous-cell papillary type, which probably originated in the pelvis of the kidney; however, this could not be definitely determined because the destruction of the tissue was so advanced. The ureter was not involved. (Fig. 8.)

In addition to Cases 1 and 2 there were three in which papillary tumors originated in the parenchyma of the kidney. In two it seemed probable that the tumors were secondary to cysts. In all three the growths were so extensive and destructive that it was difficult to be certain of their exact nature; however, in the light of more careful study they appeared to be papillary adenomas.

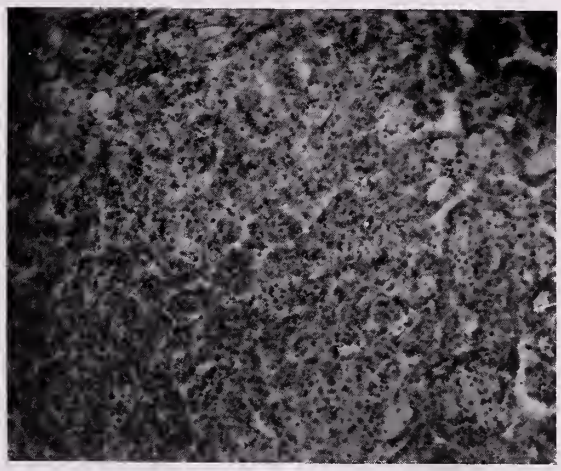

Fig. 10 (103235). Photomicrograph, same as Figure 9).

Fifty-one of the series of 207 cases were of benign tumor, and 34 of these were cysts. One hundred fifty-six cases were of malignant tumor, and 113 of these were classified as hypernephromas, 22 as carcinomas and 15 as sarcomas.

ABSTRACTS OF HISTORIES OF THREE CASES OF PAPILLARY ADENOMATOUS TUMOR OF THE KIDNEY

Case 3 (34504).—A man, aged 47 years, had been subject to attacks of colicky pain for from twenty to thirty years. The pain began in the right loin and extended downward. Blood and pus had been noted in the urine. The attacks appeared at intervals of from a few months to four years. Between attacks the patient was well. During the past two years the pain had been more frequent, and in the past year it was almost constant, especially at night. There was blood in the urine most of the time. The patient had lost weight for several months, and was forty pounds under weight.

At the time of our examination the patient was some-

what anemic and emaciated. The hemoblobin was 70 per cent. Several small shadows in the right-kidney area were seen in the radiograph, and a mass which was supposed to be an enlarged kidney could be palpated. Blood and pus were found in the urine, although the amount of blood was not sufficient to be suggestive of a tumor. A diagnosis of right pyonephrosis with stones and a normal left-kidney, was made.

At operation, March 1, 1910, the enlargement proved to be due to a malignant papillary adenoma of the pelvis of the kidney. The tumor was rather large; stones were present in the pelvis. The patient made a good immediate recovery from the operation. He died suddenly in July of the same year.

Case 4 (103235).—A man, aged 29, came for examination complaining of hematuria. Eight years before,

Fig. 11 (141532). Photomicrograph of papillary adenomatous tumor of the parenchyma of the kidney. The tumor is made up of columnar cells with intervening fibrous stalks.

following heavy lifting, he had had severe pain for five or six hours, which extended from the right testicle along the right abdomen. Clots of blood were passed; this recurred for a few hours three or four times a year. The patient had had only two attacks of colic, the last one four years before his visit to the Clinic. He had had no frequency, urgency, or burning, but some pain about the neck of the bladder when the clots passed.

The functional test of the kidneys showed a phenolsulphonephthalein return in fifteen minutes, 56 per cent in two hours. A slight amount of albumin, some pus, and red-blood cells were found in the urine. Cystoscopic examination showed urine spurting normally from the right meatus, but there was some question as to whether it was absolutely free from blood. The hemoglobin was 84 per cent. A diagnosis of a surgical right kidney was made. The patient went home presumably to arrange his affairs and return for an operation, but he waited three months, at the end of which time he was weak and emaciated, and his hemoglobin had dropped to 44 per cent. Blood had been present in his urine except for short intervals. At operation, on July 28, 1914, a small carcinomatous papillary cyst adenoma of the right kidney was found, and the kidney was removed. The renal artery resembled a pipestem, and very marked hardening of its tissues was noted. The patient made a good immediate recovery, and was discharged in good condition. (Figs. 9 and 10.)

Case 5 (141532).—A woman, aged 45, came for examination because of "kidney trouble." Her appendix and one ovary had been removed. At intervals during the previous three years she had had hematuria of varying degrees, and had passed clots and also bright red blood. During the last attack, one month before, she passed a teacupful of bright-red blood, and at the same time experienced colicky pain in the right-kidney area. She voided two or three times at night, and had lost ten pounds in weight in a year.

Examination showed pus and blood in the urine, and an indefinite enlargement in the upper pole of the right-kidney. The hemoglobin was 82 per cent. The functional test showed that 20 per cent phenolsulphonephthalein passed in two hours, and just a trace of blood and no urine coming from the right side. A diagnosis of tumor of the right kidney was made. At operation, on September 28, 1918, the kidney and adrenal gland were removed. The tumor was found to be a carcinomatous papillary cystadenoma. Complete suppression occurred after the operation, and the patient died about the tenth day. Necropsy showed no other evidence of malignancy, though it did reveal a marked nephritis in the remaining kidney, a cholecystitis and cholelithiasis, and a hemorrhagic colitis. (Fig. 11.)

SUMMARY OF CASE HISTORIES

A brief review of the histories of these three cases of papillary adenomatous tumors would seem to indicate that pain in the region of the affected kidney, extending into the loin, is a common accompaniment of renal adenoma, and that patients thus afflicted quickly show emaciation. A palpable tumor was present in all the cases. Blood in the urine is a common symptom in cases of malignant tumor of the kidney, except sarcoma, which occurs almost altogether in children. Blood coming from one kidney should suggest tumor of the kidney. In this connection it is necessary to keep in mind the possibility of tuberculosis, and also those unexplained cases of essential hematuria. The bleeding in our case of papillary tumor of the pelvis of the kidney was different from that which occurred in the three cases of papillary adenomatous tumors. In the first case it occurred in hemorrhages, and the urine was otherwise clean. In the cases of papillary adenomatous tumors a great deal of blood and pus in the urine was a constant finding. The *x*-ray shadows showed stone, and this led us to think

that pyonephrosis and calculi might be present. One point discussed by Cumston in the differential diagnosis is that finding a hematonephrosis in a case in which hemorrhages had been the chief symptom, would suggest the presence of a pelvic papilloma. This writer inferred that the papilloma would at times obstruct the ureter, and thus cause a hydronephrosis. It seems to me that a colloidal silver plate made of the pelvis of the kidney in a case of renal papilloma might be quite suggestive, and possibly with the plate a diagnosis could be made; at least a cystogram made of the bladder in which a papilloma exists usually gives a characteristic picture. In our examination, and especially in the treatment of these cases, we must bear in mind the possibility of the existence of a papilloma in the ureter alone which will produce these same symptoms. This is a very rare lesion, though there are a few cases on record.

TREATMENT

Nephrectomy is the treatment indicated in cases of squamous-cell papillomas and papillary adenomatous tumors of the kidney if the opposite kidney is in good condition. Conservative treatment of such tumors is almost conclusive evidence that they will recur elsewhere, and it should be also taken into consideration that there is a possibility of an immediate change from a benign to a malignant growth. It would seem almost unnecessary to remove the ureter with the kidney in cases of renal papillary adenomatous tumors when there is no apparent extension into the ureter, but our experience with this one case of squamous-cell papilloma of the pelvis certainly indicates the advisability of always removing the entire ureter down to the wall of the bladder at the time of the nephrectomy, or at a second-stage operation very soon afterward. The most probable point at which broken-off pieces of squamous-cell papillary tumor of the kidney find lodgment is just at the ureterovesical juncture; therefore the surest cure is to remove the entire ureter.

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ALPHA OMEGA ALPHA MEDICAL FRATERNITY*

By F. J. Souba, B. S., M. D.
MINNEAPOLIS

Fellow Members of Alpha Chapter of Minnesota:

Being stimulated by a desire to learn more of the Alpha Omega Alpha Fraternity,—what it means, what its mission is, and what progress it has made,—I set about collecting what information I could obtain. This information, although not as complete as I am in hopes to have it, struck me rather forcibly, and set me thinking. I feel that, perhaps, the majority of the members of Alpha Chapter of Minnesota are equally as uninformed as I was myself before my investigations. This is my excuse for presenting this address and asking your attention for a few moments.

The Alpha Omega Alpha Fraternity is a non-secret, fourth-year, medical honor society, membership in which is based entirely on scholarship and character. Women are admitted on the same terms as men. Race, color, creed, sex, and social standing form no barrier to membership, which is obtained by the election of students from the last half of the third year and from the fourth year of their medical work. A small number of physicians may be elected from those who have performed some distinguished service to their fellows. It has been the custom in Minnesota to propose to the Board of Directors the name of the speaker at our annual dinner and, if elected, to present him with the badge of the Fraternity.

The specific mission of the Fraternity is to encourage personal honesty and the spirit of medical research. It is the only order of its kind in medical schools on this continent. Its methods for the advancement of medical education place

*President's address, presented at the annual meeting of the Alpha Chapter of Minnesota, April 24, 1919.

it in a class with such organizations as the Carnegie Foundation for the Advancement of Teaching, the Council on Education of the American Medical Association, and the American College of Surgeons, all of which are striving for better things in the profession.

The Fraternity was organized on August 25, 1902, by six senior students in the bacteriological laboratory of the College of Physicians and Surgeons of Chicago. Five of these men graduated from the College of Physicians and Surgeons; and one, who is the founder and father of the Fraternity and is still secretary-treasurer of the National Society, Dr. William Webster Root, graduated from Rush Medical College. It was but a short time, December 13, 1902, before a chapter was organized at Rush Medical College; and on February 7th of the following year a chapter was organized at Northwestern University Medical School. Before the close of the school year of 1903, chapters were organized at Western Reserve University Medical School, Jefferson Medical College, and the Medical Department of the University of Pennsylvania. Other schools rapidly followed, so that today we have twenty-two chapters, or one in nearly every school of the highest rank in Canada and the United States. Besides those mentioned we have chapters, named in the order of their acceptance, at Washington University, Harvard University, University of California, Johns Hopkins University, University of Toronto, Columbia University, University of Michigan, University of Minnesota, Cornell University, Syracuse University, McGill University, University of Nebraska, Tulane University, University of Cincinnati, University of Pittsburgh, and Indiana University. As the medical schools of this country raise their standards and requirements, they become eligible; and in the near future some ten or fifteen schools will have reached our standards so that the number of our chapters will increase, assuming that all such schools apply for chapters.

One cannot readily read or write of the early history of Alpha Omega Alpha without mentioning three names that were associated with it: William Webster Root, Burchard Hayes Roark, and Winfield Scott Hall. To quote Dr. Root: "Root conceived the idea, wrote the constitution, designed the badge, and has fathered the movement generally; Roark assisted in organizing the chapter at Rush Medical College and took a special trip east, at which time chapters were organized at Western Reserve, at Jefferson, and at the University of Pennsylvania. The funds for this trip were advanced by the founder. Hall has, ever since the formation of the Northwestern chapter, recognized the significance of this movement, and has thrown the immense prestige of his reputation, as an educator, lecturer, and author of international fame, into the Fraternity," of which he was head for several years, and is still a member of its board of directors. A glance at the list of officers and board of directors of our National Society quickly gives one an idea of the support our Fraternity has: John Heffron of Syracuse University, President; John J. MacKenzie of the University of Toronto, Vice-President; William W. Root, Secretary-Treasurer; Winfield S. Hall of Northwestern University; Walter B. Cannon of Harvard University; Lewellys F. Barker of Johns Hopkins University; and Irving S. Cutter of the University of Nebraska.

The Alpha Chapter of Minnesota was organized January 15, 1908. Unfortunately, the early records of our chapter have been lost or mislaid; at any rate, I have not been able to find them at this writing. The charter members included three faculty members, five senior students, and two junior students. The early meetings of the chapter were held in the room of some one of the members, but very little seemed to have been accomplished. For some reason the chapter did not grow and become active in its inception, but, rather, became inactive and was not revived again till 1914. Since that time it has progressed rather slowly, the excuse offered being the great World War, which carried away many of our members and added new responsibilities on those who remained at home. Besides the ten charter members we have taken in two honorary members, one member by transfer and seventy-five student members, including the initiates of this evening, making a grand total of eighty-eight. Of this number, however, it is my sad duty to report the death of three, one of whom died while in the service in the Students' Army Training Corps at our University. Thus we have eighty-five active members. I have been unable definitely to determine the exact number who have been in military service, but I can assure you that Alpha Chapter of Minnesota has been well represented. Many of our members show a keen interest in the Fraternity, whereas others are seemingly indifferent. It is hoped in the future, now that the reconstruction period is on us and conditions are again beginning to assume their natural status, that

Alpha Chapter of Minnesota will take onto itself a new impetus, not only in reviving its old members into seeing the opportunity afforded them in being members, but also in stimulating the student body of our University in a keen desire to join our ranks, and put the chapter at the top of all others at the Medical School.

In this connection I wish to offer a few suggestions for the new officers:

1. The executive committee of our chapter should meet as early as possible after the opening of the school year in the fall, and plan their work for the year. Meetings after that should be held regularly and as often as needed to carry on the work of the chapter.

2. After carefully studying the election to membership, I would suggest the election of some third-year men, or those in the year before graduation. This seems of vital importance, for these are the men we must look to for carrying on the work of the chapter. The National Society rules that not more than five can be elected from this class. These men should attend the annual dinner, there to be inspired with enthusiasm for the ideals of the society. The National Council at its last meeting, on June 10, 1918, unanimously recommended that hereafter one-fifth of the graduating class be elected, in place of one-sixth, as at present. This, however, was objected to by several chapters, so we must continue as before. Again, many of the graduates, as here at Minnesota, are required to serve interneships, so that the chapter has their services for a longer time. Too frequent changing of officers, especially if they have proven efficient, is detrimental to the society. This is especially true of the secretary-treasurer.

3. The officers of the chapter should be chosen from the student body, or from those serving interneships, for they have more time to look after the details of the society. They can always obtain help or suggestions from older members or from our faculty members. The Counselor should be consulted frequently.

4. The annual address, which should always be given by a distinguished member of the profession, is best given at an open meeting to which the public is invited. The speaker should be notified early, so that he shall have ample time in which to prepare his address. I would suggest that he be chosen at the first meeting in the fall, and notified at once. It is well that the address be published, and reprints made, on which it should be stated before what chapter it was given, with perhaps a list of the chapter and general officers.

5. In selecting the Counselor his interest in the society should be given first consideration, rather than his fame as a scholar. The Counselor must always be a faculty member of the school.

6. I would also suggest to the new officers that some steps be taken in the near future to have our chapter catalogued, as has been done at Harvard, Western Reserve, and the University of Pennsylvania.

7. Lastly, and most important of all, I wish to call attention of the chapter to the activities of the chapters at Harvard, Toronto, Michigan, and Syracuse, where scientific programs are being given at stated intervals. At Harvard for several years past the chapter has held regular monthly meetings, which are devoted to reading and discussion of scientific papers and to clinical reports. At Toronto the meetings are held twice a month, and papers of a similar character are presented. The program for the following year is laid out before the close of the spring term. Each candidate is asked to choose a subject, and, if he does not, one is given him upon which he is expected to report at his scheduled time. At Syracuse they hold four meetings a year, which are devoted to similar papers and discussions. Perhaps the most activity and interest are shown at the University of Michigan, where the meetings are held every week and on Sunday afternoons. The secretary reports that no announcements need be sent out, and that roll-call is never necessary. "Everyone is on the job." Their meetings are devoted to scientific papers, which, many times, are a symposium on some subject of interest, or, at other times, to demonstration clinics, men of international reputation being asked to take part. Some of the other activities that have taken place at some of the chapters may be mentioned briefly. At the University of Illinois the chapter placed in the Quine College Library an Alpha Omega Alpha case with thirty dollars' worth of books, including three volumes of Robert Koch's Works, the Life of John Shaw Billings, and the Life and Letters of William Beaumont. They expect to add suitable volumes to these from time to time, thus forming a splendid monument to commemorate the devotion of past students to the fraternity and to the college. At Western Reserve the chapter has instituted an Alpha Omega Alpha Prize Essay Contest. The prize is fifty dollars, and is open to anyone regis-

tered as a regular student in the Western Reserve University Medical School.

At all of these chapters the work of the society is shouldered by the student members, and I earnestly hope for the future progress of our own chapter that the newly elected officers and members will be able to start some such scientific meetings here at Minnesota. Always remember that it is not only an honor to be a member of the Alpha Omega Alpha Fraternity, but is also an opportunity for hard work. I am sure you will be able to get all the help you want in whatever you may undertake. I feel certain that if this is done it will not be long before it becomes a part of the student's life at the school, and a great influence to stimulate better work, not only among our own members, but also in the student body at large. I would advise you to strike while the iron is hot, and I suggest that the executive committee meet before the end of this term and arrange programs for the coming year. This will give all ample time in which to prepare and work up their subjects.

Permit me to take this opportunity to thank you for the honor you have shown me by electing me your president for two terms. I certainly wish to express my appreciation to all the members who have, in any way, helped me in my work. Especially do I wish to thank Dr. Olga Hansen, our secretary-treasurer, for her faithful service. I can certainly hope for nothing more than to see Alpha Chapter of Minnesota progress.

1007 Donaldson Building.

MINNEAPOLIS CLINIC WEEK PROGRAMS

The following programs of the Minneapolis Clinic Week are published for the purpose of showing the medical men of the Northwest who were unable to attend, the volume and the character of the work done.

Clinic Week is now an assured permanent annual event; and the Clinical Section of the Hennepin County Medical Society, under whose auspices the work is done, will make a thorough study of the problems presented, in order to make the "Week" one of real interest and genuine value.

MINNEAPOLIS CLINIC WEEK

Conducted by the Clinical Section of the Hennepin County Medical Society, May 6 to 9, 1919.

TUESDAY BULLETIN—MAY 6

Abbott Hospital

10 A. M. to 12 M.

General Pediatric Clinic - - Dr. J. P. Sedgwick

Asbury Hospital

9 A. M. to 12 M.

Mastoid; excision of the tarsus; tonsillectomy (3 cases) - - - - - Dr. John A. Watson

9:30 A. M. to 10:30 A. M.

Surgical Clinics - - - Dr. Geo. E. Thomas

City Hospital

9 A. M. to 12 M.

Gall-bladder operation; demonstrations,—subtotal resection of the stomach; cancer of the rectum with inguinal colostomy; double harelip and cleft-palate; cleft-palate, silver wire and lead plate (Brophy's operation); empyema, rubber tube inserted through trocar; Dakin's fluid and negative pressure; paraffin dressing for burns - - - - - - Dr. A. T. Mann

Gynecological Survey - - Dr. J. H. Simons

9 A. M.

General Medical Clinic - - Dr. T. A. Peppard

10:00 A. M.

General Medical Clinic - - Dr. C. N. Brooks

11 A. M. to 1 P. M.

Bedside demonstration; pemphigus; erythema; gonorrheal rheumatism; gonorrhea in the female; cancer of the prostate; infantile genitalia - - - - - - - - - - Dr. F. R. Wright

Ethmoid abscess; tonsillectomy - Dr. A. E. Smith

Obstetric Clinics—Demonstration of parturition under gas anesthesia (At such times during the week as cases present) - Dr. C. O. Maland

DISPENSARY CLINICS—Daily

Eitel Hospital

9:00 A. M.

Bone-graft for ununited fracture of the tibia - - - - - - - - - Dr. Emil S. Geist

General Surgery - - - Dr. E. C. Robitshek

Fairview Hospital

9:00 A. M. to 12 M.

Suspension of the uterus; right ovarian cyst; plastic perineum; cancer of the mesentery; gastric ulcer; thyroidectomy; blood-transfusion - - - - - - - Dr. N. H. Sheldrup

Hillcrest Hospital

8:30 A. M. to 12 M.

Hernia, Breast and Tongue - - - - - - - - Drs. J. W. Little and S. H. Baxter

Northwestern Hospital

8:30 A. M. to 12 M.

Tonsillectomy (local anesthesia), bloodless (3 cases); strabismus, partial tucking operation (2 cases); needling; congenital dislocation of the crystalline lens - Drs. E. S. and G. Elmer Strout

Thyroid surgery and nephrectomy for tuberculous kidney - - - Dr. Gustav Schwyzer

10:00 A. M. (Room 1)
Medical Clinic—Influenza and some of its complications - - - - Drs. White and Lajoie

NORWEGIAN HOSPITAL (Lutheran Deaconess)

8:00 A. M.
Appendectomy; removal of tonsils and adenoids - - - - - - - - Dr. D. A. MacDonald

9:00 A. M.
Hemorrhoids and tonsils - Dr. C. A. Witham

10:00 A. M.
Exploratory laparotomy - - Dr. C. P. Nelson

ST. BARNABAS HOSPITAL

9:00 A. M.
Cataract and mastoid - - Dr. J. F. Schefcik
Ununited gun-shot fracture of the humerus; chronic appendicitis; gastroenterostomy for carcinoma of the pylorus; herniotomy; abdominal section; intravenous administration of neosalvarsan; inguinal adenitis - - - - - - Dr. F. A. Dunsmoor and Dr. J. O. Taft

9:00 to 12 M.
Local anesthesia, with lantern slides and motion pictures; pelvic laparotomy under local anesthesia; cleft-palate - - - Dr. R. E. Farr

9:00 A. M.
Appendectomy, chronic; adenomatous goiter; cholecystectomy; carcinoma, pelvic - Dr. E. R. Hare

ST. MARY'S HOSPITAL

8:30 A. M. to 12 M. (Room 1)
Goiter, exophthalmic; hernia and varicose veins - - - - - - - - - Dr. H. B. Sweetser

8:00 A. M. (Room 2)
Frontal sinus operation, and needling of cataract - - - - - - - - - Dr. G. E. Benson

9:00 A. M.
Diagnosis of nervous diseases - Dr. W. A. Jones

11:00 A. M.
Differential diagnosis of aneurysm of the aorta and tumors of the thorax - - Dr. J. G. Cross

SWEDISH HOSPITAL

8:00 A. M. (Room A)
Gall-bladder disease; hysteropexy and ovariotomy; rectal polypus and hemorrhoids; tonsillectomy (2 cases) - - Dr. Theodore Tennyson

8:30 to 10:30 A. M. (Room B)
Radical mastoid; tonsillectomy (2 cases) - - - - - - - - - - Dr. J. G. Erickson

10:30 A. M.
Empyema of the Antrum of Highmore (3 cases) - - - - - - - - - Dr. S. G. Wright

8:00 A. M. (Room C)
(1) Appendectomy, suspension of the uterus, perineorrhaphy, and tracheoplasty; (2) perineorrhaphy and panhysterectomy; (3) amputation of the cervix, suspension of the uterus, and ovariotomy; (4) ovariotomy and salpingectomy - - - - - Drs. C. C. and R. R. Kennedy

9:00 A. M. (Sun parlor)
Pernicious anemia (3 cases) - Dr. J. P. Schneider

8:00 A. M.
Laboratory Technic - - - Dr. C. R. Drake

THOMAS HOSPITAL

11:00 A. M. to 12 M.
Pulmonary Tuberculosis - - Dr. F. Hacking

UNIVERSITY HOSPITAL

8:30 to 10:30 A. M.
Surgical Clinic - - - Dr. H. C. Strachauer

9:00 to 10:00 A. M.
Medical Clinic - - - Dr. L. G. Rowntree

10:00 to 11:00 A. M.
Medical Clinic - - - - Dr. R. I. Rizer

10:30 A. M. to 12 M.
Surgical Clinic - - - - Dr. J. A. Johnson

11:00 A. M. to 12 M.
Medical Clinic - - - - Dr. S. E. Sweitzer

8:30 to 10:30 A. M.
Two senila cataracts; exenteration of the ethmoid; secondary cataract, needling - Dr. H. S. Clark

9:00 to 10:00 A. M.
Röntgenology - - - - Dr. F. S. Bissell

Note.—Out-patient clinics in surgery, obstetrics, gynecology, and pediatrics will be given at the Out-Patient Department (Millard Hall) from 10:30 A. M. to 12 M. daily.

SYMPOSIUM—2:30 P. M.

Gold Room, Radisson

INFLUENZA AND ITS PNEUMONIAS

Dr. Henry Ulrich, Chairman

1. Pathology, with Demonstration. Dr. H. E. Robinson.
2. Symptomatology. By Dr. T. A. Peppard.
3. Bacteriology. By Dr. W. P. Larson.
4. Treatment. By Dr. E. L. Gardner.
5. Empyemas. By Dr. A. A. Law.
6. Surgery. By Dr. A. T. Mann.
7. Neurology. By Dr. C. E. Nixon.
8. Head Complications. By Dr. J. D. Lewis.

WEDNESDAY BULLETIN—MAY 7

ABBOTT HOSPITAL

8:30 A. M.
Operation for squint; pansinusitis with orbital abscess; irrigation of an acute maxillary sinusitis; demonstration of a small abscess in a submerged tonsil - - - Dr. R. A. Campbell

ASBURY HOSPITAL

9:00 A. M.
Smith-Indian cataract operation; removal of dislocated lens; exenteration of ethmoids (a simple method); tonsillectomy (clamp method) - - - - - - Drs. F. J. and J. A. Pratt

8:00 A. M.
Tonsillectomy (Beck's method) - Dr. E. A. Loomis

8:00 A. M.
Appendectomy; submarine graft for ununited fracture - - - - - Dr. A. E. Wilcox

8:30 A. M.
Tonsillectomy and adenoids - Dr. Russell Wilcox

10:30 A. M.
Hysterectomy - - - - Dr. H. H. Helk

12 M.
Gall-bladder and appendix - - Dr. O. H. Bakke

City Hospital

8:00 to 11:00 A. M.
Operation for retroflexion and adherent adnexa; operation for lacerated cervix and post-operative omental and intestinal adhesions; operation for retroflexion, laceration of cervix and perineum (operator's method of correcting displacements); operation for large adherent ovarian cyst - - - - - Dr. A. E. Benjamin

11:00 A. M. to 1:00 P. M.
N_2O gas and oxygen delivery; ante and postpartum history and management; obstetrical technic - - - - - - Dr. A. Tanner

11:00 A. M. to 1:00 P. M.
Submucous resection nasal septum; tonsillectomy, local (4 cases); tonsillectomy, general, bloodless method (4 cases); lingual tonsillectomy (local); mastoidectomy; and exhibition of cases - Drs. Lewis, Bishop, Loomis and Phelps

8:30 to 11:00 A. M.
Osteomyelitis of foot; hemorrhoidectomy under local anesthesia - - - Dr. A. H. Parks

11:00 A. M. to 1:00 P. M.
Genito-urinary surgery - Dr. Franklin R. Wright

9:00 A. M.
General Medical Clinic - - Dr. H. L. Ulrich

10:00 A. M.
Diseases of the Chest - - Dr. E. L. Gardner

10:00 A. M.
Technic of lumbar puncture and contagious diseases - - - - - - Dr. G. R. Matchan

11:00 A. M.
General Medical Clinic - - Dr. J. E. Hynes

10:00 A. M. to 12 M.
Pediatrics - - - - Dr. F. J. Huenekens

Eitel Hospital

8:30 A. M. to 12 M.
Goiter (3 cases); fibroid (1 case); appendectomy (2 cases); osteomyelitis; carcinoma of the breast; ovarian tumor; inguinal hernia - - - - - - - - - - - Dr. G. G. Eitel

Hillcrest Hospital

8:30 A. M. to 12 M.
One fibroid and two other abdominal cases - - - - Dr. J. W. Little and Dr. S. H. Baxter

8:30 A. M. to 11:00 A. M.
Radium Clinic - - - - Dr. A. S. Fleming

Northwestern Hospital

9:00 A. M. (Room 2)
Abdominal surgery (2 cases) - Dr. A. T. Mann

8:00 A. M. to 12 M. (Rooms 3 and 4)
Modified mastoid; tonsillectomy (6 cases); illustrating various methods - - - - - - Dr. Horace Newhart and Dr. Walter E. Camp

8:00 A. M. (Room 1)
Thyroid and abdominal surgery - Dr. Frederick Poppe

Norwegian Hospital (Lutheran Deaconess)

8:00 A. M.
Tonsils (2 cases); adenoma thyroid (2 cases); subacute appendix; exophthalmic goiter; anal fissure; presentation of interesting post-operative cases - - - - - Dr. C. M. Roan

St. Barnabas Hospital

9:00 A. M. to 12 M.
Tonsillectomy, local anesthesia (3 cases); tonsillectomy (Sluder-Freligh technic) (8 cases); strabismus, tucking - - Dr. G. Elmer Strout

9:00 A. M. to 12 M.
(9:00)—Motion picture demonstration, with lantern slides of local anesthesia cases. (10:00)—Pelvic laparotomy under local, appendectomy under local. (11:00)—Demonstration of chest cases with bismuth - - - Dr. R. E. Farr

9:00 A. M.
Fibroma cervicalis; dermoid, frontal; herniotomy; fracture of the humerus; adenomatous goiter - - - - - - - - - Dr. E. R. Hare

St. Mary's Hospital

9:00 A. M.
Club-foot; open operation for an ununited fracture, and a bone-graft - - Dr. Emil S. Geist

8:00 A. M. to 11:00 A. M.
Hysterectomy; perineorrhaphy; spina bifida; umbilical herniotomy - - Dr. N. A. Johnson

9:00 A. M. to 10:00 A. M.
Salpingitis; Hurst's operation - Dr. W. H. Condit

Swedish Hospital

8:00 A. M. to 11:00 A. M.
Exophthalmic goiter; inguinal herniotomy; Coffey's operation for suspension of uterus; femoral hernia; ventral hernia following pus appendix, drainage - - - - Dr. C. M. Kistler

8:00 A. M. to 10:00 A. M.
Thyroidectomy for simple goiter; thyroidectomy for cystic goiter; ligation of superior thyroids; amputation of leg for diabetic gangrene - - - - Drs. A. E. Johnson and C. C. Kennedy

10:00 A. M.
Femoral hernia (local anesthesia); tubercular glands of neck; exhibition of radiographs and patients—basal fracture of cranium; fracture of body of lumbar vertebra (2 cases); fracture of pelvis, with ruptured bladder - Dr. J. H. Rishmiller

8:00 A. M. to 10:30 A. M.
Nephrotomy for pyonephrosis; fracture of twelfth dorsal vertebra; fracture of pelvis and comminuted fracture of tibia - - Dr. O. A. Olson

10:30 A. M.
Cholecystectomy; excision of varicose veins: hemorrhoids - - - - Dr. A Soderlind

11:00 A. M.
Mammary tumor (radical) - Dr. C. P. Nelson

University Hospital

8:30 A. M. to 10:00 A. M.
Surgical Clinic - - - - Dr. A. McLaren

9:00 A. M. to 10:00 A. M.
Medical Clinic - - - Dr. S. Marx White

9:00 A. M. to 10:00 A. M.
Röntgenology - - - - Dr. F. S. Bissell

10:00 A. M. to 11:00 A. M.
Urology - - - - - Dr. F. R. Wright

10:00 A. M. to 11:00 A. M.
Nervous Diseases - - - Dr. A. W. Morrison

10:30 A. M. to 12 M.
Pediatrics - - - - - Dr. F. C. Rodda
11:00 A. M. to 12 M.
Medical Clinic - - - - Dr. J. A. Lepak
11:00 A. M. to 12 M.
Gynecology - - - - Dr. J. C. Litzenberg

SYMPOSIUM—2:30 P. M.
Gold Room, Radisson
HEART AFFECTIONS
J. G. Cross, Chairman

1. Heart Affections; Auricular Fibrillation; Auricular Flutter; Clinical Recognition and Treatment. By Dr. J. E. Hines.
2. Angina Pectoris and Chronic Myocarditis; Diagnosis and Treatment. By Dr. J. W. Bell.
3. Heart Affections in the Child. By Dr. F. C. Rodda.
4. Surgery of the Heart and Pericardium. By Dr. J. Warren Little.
5. Selected Demonstrations in Heart Pathology. By Dr. H. E. Robertson.

THURSDAY BULLETIN—MAY 8

ABBOTT HOSPITAL

8:30 A. M.
Cholecystitis; tuberculous salpingitis; ulcer of the duodenum - - - - Dr. A. C. Strachauer

ASBURY HOSPITAL

7:45 A. M.
Hypertrophy of prostate - - Dr. Norman Smith
9:00 A. M.
Femoral hernia - - - Dr. H. G. Franzen
10:00 A. M.
Appendectomy - - - - Dr. W. J. Byrnes
9:00 A. M.
Nephrectomy for a tuberculous kidney - - - - - - - - - - Dr. F. A. Olson
9:00 A. M.
Strabismus (3 cases) - - Dr. J. A. Watson
9:00 A. M. to 11:00 A. M.
Smith-Indian cataract operation; exenteration of ethmoids and sphenoid (a simple method); pterygium; tonsillectomy (clamp method); mastoidectomy (simple, using electric burrs) - - - - - - Drs. F. J. and J. A. Pratt
10:00 A. M. to 11:00 A. M.
X-Ray Clinic - - - Dr. C. D. Harrington
11:30 A. M.
Goiter - - - - - - Dr. E. E. Austin

CITY HOSPITAL

8:30 A. M. to 10:00 A. M.
Railroad injury, showing amputation of arm and leg, fracture of jaw and extensive scalp wounds; fracture of the femur treated with application of Parham-Martin bands; Colles' fracture, demonstrating the application of plaster splints - - - - - Dr. E. K. Green
8:30 A. M. to 10:30 A. M.
Cataract; tonsillectomy (3 cases) - Dr. A. E. Smith
9:00 A. M.
Diagnostic methods in nervous and mental diseases - - - - - - Dr. W. A. Jones
10:30 A. M. to 12:30 P. M.
General Surgery - - - - Dr. H. C. Stuhr
9:30 A. M. to 11:00 A. M.
Hypertension; gout; polycythemia; aortitis; cardiac cases - - - - - Dr. H. L. Staples
10:00 A. M.
Contagious diseases - - - Dr. L. O. Dart
10:30 A. M. to 12:30 P. M.
Laparotomy (pelvic tumor); curettage; repair of perineum under local anesthesia; demonstration of nitrous oxide and oxygen anesthesia - - - - - - - - - Dr. J. Simons
11:00 A. M.
Pediatrics - - - - - Dr. N. O. Pearce
11:00 A. M.
General Medical Clinic - - Dr. T. A. Peppard
12:00 M.
Tuberculosis Dispensary - Dr. F. H. Hacking

DISPENSARY CLINICS—9:00 A. M. to 12:00 M.

COUNTY MORGUE (909 Fifth St. S.)

8:00 A. M.
Autopsies and gross pathology - - - - - - Dr. Gilbert Seashore and Dr. E. T. Bell

EITEL HOSPITAL

8:30 A. M. to 12:00 M.
Adbominal exploration; appendectomy (3 cases); goiter; uterine fibroid; gall-stone; hypertrophy of the prostate (complete obstruction); resection of the stomach for carcinoma; inguinal hernia; carcinoma of the neck - Dr. Geo. G. Eitel

FAIRVIEW HOSPITAL

8:00 A. M.
Cholecystectomy; thyroidectomy; gastro-enterostomy; hysterectomy; cholecystotomy; herniotomy; ventral (local anesthesia); vesica vaginal fistula; neosalvarsan injection; necrosis of palate; blood-transfusion for secondary anemia; vasectomy (bilateral), hydrocele, left, and circumcision (local anesthesia) - - - - - - - - - - Dr. N. H. Sheldrup

HILLCREST HOSPITAL

8:30 A. M. to 11:00 A. M.
Radium Clinic - - - - Dr. A. S. Fleming
Surgical Clinic—Nose and Throat - - - - - - - - - Dr. W. E. Patterson
9:30 A. M.
Medical Clinic - - - - Dr. L. A. Nippert

INFANT WELFARE CLINIC
(Lake St. and Twenty-seventh Ave.)

10:00 A. M. to 12 M.
Clinic in simple infant-feeding - Dr. E. J. Huenekens

NORTHWESTERN HOSPITAL

8:00 A. M. to 1:00 P. M.
Appendicitis and membranous pericolitis; uterine prolapse with cystocele, operative methods for cure; goiter operation, improved technic; uterine retrodisplacement and appendicitis, a satisfactory operation for correcting the displacement; suprapubic prostatectomy; empyema, special operative treatment; osteomyelitis of the femor with fracture - - Dr. A. E. Benjamin

8:30 A. M. (Room 3)
Mastoid operation, radical - - Dr. E. S. Strout
9:00 A. M. (Room 4)
Tonsil Clinic - - - - Dr. Douglas Wood
9:00 A. M. to 10:00 A. M.
X-Ray Clinic - - - Dr. C. D. Harrington
9:00 A. M.
Hernia surgery; plastic bone surgery - - - - - - - - - - - Dr. O. W. Yoerg
Buffet luncheon will be served at the hospital from 12 M. to 1:00 P. M.

NORWEGIAN HOSPITAL

8:00 A. M.
Tonsillectomy - - - Dr. D. A. MacDonald
8:30 A. M.
Adenomatous thyroid; tonsils and adenoids; exhibition of two post-operative cases; two partial prostatectomies - - Dr. A. C. Tingdale
9:00 A. M. to 10:30 A. M.
Cholecystectomy; exhibition of a case of post-operative skin-graft - - Dr. E. L. Paulsen

ST. BARNABAS HOSPITAL

9:00 A. M.
Exophthalmic goiter; gastric ulcer; retro-uterine fibroma; intraligamentous tumor, and appendectomy; intravenous administration of neo-salvarsan (2 cases); amputation of foot for Ranaud's disease - - Dr. F. A. Dunsmoor
9:00 A. M.
Laceration of the perineum and cervix (modified Gilliam) - - - - - - Dr. J. H. Simons
9:00 A. M.
Abdominal surgery - - - Dr. A. E. Booth
9:00 A. M.
Nose and throat - - - - Dr. G. L. Doxey
11:30 A. M.
Laryngeal obstruction in a child 14 months old—bronchoscopy and esophagoscopy - Dr. Wm. Lerche

ST. MARY'S HOSPITAL

8:30 A. M. (Room 1)
General surgery - - - Dr. H. B. Sweetser
9:00 A. M. (Room 9)
Cystoscopy examinations - - Dr. Oscar Owre
10:00 A. M.
Herniotomy under local anesthesia - Dr. A. A. Laurent

SWEDISH HOSPITAL

8:00 A. M.
Anterior gastrojejunostomy; cholecystectomy; varicocele and hydrocele (bottle operation) - - - - - - - - - Dr. C. J. Ringnell
Submucous operation on septum; tonsils and adenoids (5 cases); empyema of antrum of Highmore - Dr. E. H. Parker and Dr. D. F. Wood
Chronic appendicitis; inguinal hernia; tonsillectomy (2 cases); facial infection - - - - - Dr. H. W. Quist and Dr. H. P. Linner
Laboratory Technic - - - Dr. C. R. Drake
9:00 A. M. (Sun Parlor)
Demonstration and treatment of cases, including diabetes, pernicious anemia, chronic ulcer of stomach, congenital heart disease, and heart and lung lesions - - - - - Dr. S. P. Rees
X-Ray Department—*X*-Ray demonstration of gastric cases - - - Dr. C. A. Donaldson
11:00 A. M.
X-Ray Department—Radiographic demonstrations of cardiac and pulmonary lesions in children - - - - - - - - - Dr. F. C. Rodda

UNIVERSITY HOSPITAL

8:30 A. M. to 10:30 A. M.
Surgical Clinic - - - - Dr. A. A. Law
8:30 A. M. to 10:30 A. M.
Senile cataracts; strabismus; ptosis; entropion—presentation of cases - Dr. Wm. R. Murray
9:00 A. M. to 10:00 A. M.
Medical Clinic - - - Dr. L. G. Rowntree
Medical Clinic - - - - Dr. R. I. Rizer
10:30 A. M. to 12 M.
Gynecology - - - - Dr. J. L. Rothrock
11:00 A. M. to 12 M.
Medical Clinic - - - - Dr. C. E. Nixon

SYMPOSIUM—4:00 P. M.

(Postponed from 2:30 P. M. on account of Parade)
Gold Room, Radisson
Dr. S. E. Sweitzer, Chairman

1. Syphilis from a Public Health Standpoint. By Dr. H. G. Irvine.
2. Pathology of Syphilis. By Dr. E. T. Bell.
3. The Importance of Early Diagnosis and Treatment of Syphilis. By Dr. John Butler.
4. Tertiary Syphilis of Internal Organs. By Dr. J. P. Schneider.
5. Genito-urinary Syphilis. By Dr. F. R. Wright.
6. Differential Diagnosis of Nervous Syphilis. By Dr. W. A. Jones.
7. Treatment of Neurosyphilis. By Dr. Angus Morrison.

Discussion opened by Dr. G. M. Olson and Dr. H. E. Michelson.

FRIDAY BULLETIN—MAY 9

[This program is necessarily incomplete, as today (Thursday) is a holiday, and the program is printed early.]

ABBOTT HOSPITAL

8:30 A. M.
Gynecological Surgery - - Dr. A. W. Abbott

ASBURY HOSPITAL

8:30 A. M. to 10:30 A. M.
Divergent strabismus (local anesthesia); tonsillectomy (local anesthesia) - Dr. H. H. Leavitt
8:30 A. M.
Nose operation; tonsillectomy and adenoidectomy - - - - - - - - - Dr. R. Wilcox
9:30 A. M.
Herniotomy (local) - - - Dr. A. H. Parks
10:30 A. M.
Tonsillectomy - - - - Dr. J. A. Hedding

CITY HOSPITAL

8:30 A. M. to 11:00 A. M.
Double salpingectomy; ovarian cyst; drainage of pelvic abscess through vagina - Dr. R. M. Pederson
8:30 A. M. to 11:00 A. M.
Demonstration of cases; empyema; abdominal adhesions - - - - - Dr. A. E. Booth
11:00 A. M. to 1:00 P. M.
General surgery - - - - Dr. R. E. Moren

11:00 A. M. to 1:00 P. M.
Tonsillectomies, local (2); tonsillectomies, general (3); secondary cataract (1); rhinoplasty, celluloid implant (1); tucking of ocular muscle (1); mastoidectomy (1) - - Dr. J. D. Lewis
12:00 M. to 1:00 P. M.
Gynecological Clinic in Dispensary - - - - - - - - - - - Dr. Geo. E. Thomas
9:00 A. M.
Nervous and mental diseases - Dr. Julius Johnson
General medicine - - - - Dr. H. L. Ulrich
10:00 A. M.
Nervous and mental diseases - Dr. L. Boutelle
11:00 A. M.
Gastro-enterology - - - Dr. H. L. Knight

COUNTY MORGUE
(909 Fifth St. S.)
10:00 A. M.
Autopsies and Gross Pathology - - - - - - Dr. Gilbert Seashore and Dr. E. T. Bell

EITEL HOSPITAL
8:30 A. M.
General surgery - - - Dr. E. C. Robitshek

FAIRVIEW HOSPITAL
10:00 A. M.
Laryngismus stridulus in adults; tonsillectomy (2 cases), general; sarcoma of the eye; cataract - - - - - - - - - Dr. L. Bradholt
10:30 A. M.
Sequelæ of cerebrospinal meningitis; tuberculous abscess of hip, simulating rheumatism - - - - - - - - - - Dr. H. L. Williams

HILLCREST HOSPITAL
Radium Clinic - - - - Dr. A. S. Fleming

NORTHWESTERN HOSPITAL
8:00 A. M. to 11:00 A. M. (Room 3)
Tonsillectomy (6 cases); radical mastoid - - - - - - - - - Dr. Horace Newhart
10:00 A. M. (Room 1)
Brain surgery (cases) - - Dr. H. W. Jones
9:30 A. M. (Room 4)
Eye Clinic (tenotomy and tucking operation) - - - - - - - - - Dr. G. E. Strout
8:00 A. M.
Thyroidectomy for toxic goiter; abdominal surgery—two cases of chronic salpingitis - - - - - - - - - Dr. Gustav Schwyzer
8:30 A. M.
Radical mastoid; simple mastoidectomy (local anesthesia); suspension laryngoscopy; tonsillectomy (6 cases); illustrating various methods - - Dr. Horace Newhart and Dr. W. E. Camp

NORWEGIAN HOSPITAL (Lutheran Deaconess)
9:00 A. M. to 12 M.
Uterine suspension, appendectomy, perineorrhaphy; herniotomy; tumor of the pelvis; salpingectomy; lipoma of the shoulder - - - - - - - - - - Dr. Nimrod A. Johnson

ST. BARNABAS HOSPITAL
9:00 A. M.
Abdominal surgery - - - Dr. H. C. Stuhr
9:00 A. M.
Submucous tonsillectomy (2 cases) - - - - - - - - - - Dr. J. S. Reynolds
9:00 A. M.
Gastropexy; prostatectomy; laparotomy; herniotomy; intravenous administration of neosalvarsan (2 cases) - - - - - Dr. J. O. Taft

ST. MARY'S HOSPITAL
8:00 A. M. (Room 3)
Cholecystotomy and suspension of the uterus - - - - - - - - - - Dr. E. O. Voyer
9:30 A. M.
Pernicious anemia; myeloid leukemia; polycythemia with splenomegaly; congenital hepolytic icterus; metabolism studies - Dr. E. L. Gardner

SWEDISH HOSPITAL
8:00 A. M. to 9:00 A. M.
Tumor of testicle - - - Dr. A. E. Hedback
9:00 A. M.
Femoral hernia; epithelioma of the lip - - - - - - - - - - Dr. C. J. Ringnell
8:00 A. M.
Thyroidectomy; cholecystectomy - Dr. C. M. Kistler
8:00 A. M.
Chronic osteomyelitis of the radius; chronic appendectomy; curettage; trachelorrhaphy; perineorrhaphy - - - Dr. Theo. Tennyson
8:00 A. M.
Laboratory technic - - - Dr. C. R. Drake

UNIVERSITY HOSPITAL
8:30 A. M. to 10:00 A. M.
Surgical Clinic - - - - Dr. H. P. Ritchie
9:00 A. M.
Pediatrics - - - - Dr. J. P. Sedgwick
9:00 A. M. to 10:00 A. M.
Medical Clinic - - - Dr. S. Marx White
9:00 A. M. to 12 M.
Mouth Infections - - - - - - - - - - Dr. T. B. Hartzell and Dr. W. A. Gray
10:00 A. M. to 11:00 A. M.
Nervous and mental diseases - Dr. A. W. Morrison
Surgical Clinic - - - - Dr. F. H. Poppe
Urology (cystoscopy) - - - Dr. F. A. Olson
11:00 A. M. to 12 M.
Medical Clinic - - - - Dr. S. E. Sweitzer
Gynecology - - - - Dr. W. H. Condit

SYMPOSIUM—2:30 P. M.
Gold Room, Radisson
FOCAL INFECTION
Dr. D. Marx White, Chairman

1. Factors to Be Considered in the Conservation or Extraction of Infected Teeth. By Dr. T. B. Hartzell.
2. The Relation of Peribronchial Infection to Other Foci (Demonstration). By Dr. F. S. Bissell.
3. Focal Infections as Related to the Eye. By Dr. Douglas Wood.
4. Focal Infections Related to Suppuration in the Nose and Throat. By Dr. E. H. Parker.
5. A Further Reason for the Reduction of Focal Infection. Dr. H. L. Ulrich.

THE
JOURNAL-LANCET
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North Dakota and South Dakota State Medical Associations

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MAY 15, 1919

MINNEAPOLIS CLINIC WEEK

The annual meeting of the Minneapolis Clinical Week, and its presentation of clinics for visiting men, came to an end Friday afternoon, May 9, and, differing from most other medical meetings, the last session was well attended, filling the Gold Room, as did all the symposium meetings, given on the four afternoons of Clinic Week.

The registration was five hundred, which included only a small number of Minneapolis men. The registration from St. Paul was much smaller than last year, but from the country it was very large, and was composed of representative medical men from fourteen states, as against nine states in 1918. Of these fourteen, one representative came from the Philippine Islands, one from the Hawaiian Islands, one from California, one from the state of Washington, and one from the state of New York. The others came from the immediate vicinity,—western Wisconsin, northern Iowa, North and South Dakota, Montana, Wyoming, Minnesota, and Arizona.

The program for this meeting varied decidedly from the program of last year in that it offered a large number of medical clinics, as well as clinics in the special branches of medicine. This method of presenting clinics was discussed, and it was decided by the Executive Committee of the Clinical Section of the Hennepin County Medical Society that it would determine whether the men wanted all surgery or a mixture of surgery, medicine, and special work. It seems quite decisively proved that mixed clinics are what the visiting men want. They expressed themselves very freely on the subject, criticism being asked for and obtained, and the majority of the men thought the program was not only well arranged, but well balanced, and they found greater pleasure in the mixed clinics than in surgical clinics alone.

Ten hospitals offered clinics, and in each one the clinics were varied in every possible way to suit the visiting members. Naturally, the hospitals in the center of the city were more liberally attended than those in the outlying districts, although even the latter had a better attendance than last year.

Then, too, to add to the glamour of the occasion, the 151st Field Artillery of the Rainbow Division returned to Minneapolis Thursday afternoon, and an enormous parade of more than ten thousand soldiers, observed by about two hundred thousand on-lookers, presented a wildly enthusiastic and dazzling spectacle. The clinics were naturally abandoned on that afternoon, but, after the parade was over, the symposium for the day met a little later and concluded its program.

Of course, the Minneapolis men cannot promise to duplicate the military parade next year, but they hope that a sufficient number of physicians will come to the meeting next year to form a parade themselves. It would be rather an interesting spectacle to see a thousand doctors marching up Nicollet Avenue, and it would be, in a measure, an education to the people, who would recognize and applaud the men who came from adjoining states to attend Minneapolis clinics. We publish in full in this issue the program of the entire four days, in order that it may be a souvenir for the visitors, as well as for the men in the Twin Cities.

The Executive Committee dislikes very much to pat itself on the back, but, good fortune having favored Minneapolis in every way, it can be said that the clinical material was even more abundant than last year. Judging from the attendance, the enthusiasm, and the interest taken in the Clinic Week this year, that of next year is even now an assured success.

The clinics began at eight o'clock in the morning, and lasted until one o'clock, officially; and yet one or two clinics ran over two or three hours, but this was unavoidable. The afternoon symposiums, beginning at two thirty, filled the Gold Room, which easily seats between three

and four hundred, thus showing a larger gathering of medical men than is often seen at the meeting of the Minnesota State Medical Association or any other medical association west of Chicago.

The banquet given by the Hennepin County Medical Society in the Roof Garden of the Radisson was attended by two hundred seventy doctors, and was addressed by Col. Major Seelig, of St. Louis, who talked entertainingly and instructively upon "Education and the War."

Another banquet, given by the Minnesota Academy of Ophthalmology and Oto-Laryngology, was attended by about two hundred members and out-of-town visitors.

THE JOURNAL-LANCET, on behalf of the Hennepin County Medical Society, desires to extend its thanks to the visiting men, who without hesitancy expressed their pleasure in attending the clinics. It also wishes to extend thanks to the managers of various hospitals, their superintendents and nurses, who contributed so successfully to the maintenance and the regularity of the clinics. The Executive Committee further wishes to express its appreciation to the newspapers of Minneapolis, which so courteously and without ostentation reported the meetings. Very few names of clinicians or readers of papers were mentioned in the press. The newspapers simply gave the subject matter, the character of the operation, and the reasons for performing it, and descriptions of medical clinics, and brief abstracts of the work done at each symposium. There was no effort on the part of the clinicians in any department to gain notoriety through the newspapers, which is a gratifying fact.

HOSPITAL STANDARDIZATION

The Minnesota Hospital Association is to meet in Minneapolis on the 2d of June, and will confer with the Hennepin County Medical Socity on or about June fourth.

The meeting is to be directed entirely toward hospital standardization. The first speaker will be Dr. John A. Bowman, who was president of the Illinois University for some time. Dr. Bowman is not a doctor of medicine, but a doctor of philosophy. He now is the director of the American College of Surgery. He is known for his straightforward speaking, and in all probability he will give the Hennepin County Medical Society and the superintendents and directors of hospitals in Minneapolis many new things to think over. If possible, he will be asked to speak at the Civic and Commerce Association meeting, in order to prepare the way for the interests of the public in standardization of all hospitals. It is, of course, inevitable that many of our hospitals will be very hard hit by some of his remarks, but his suggestions will be in the nature of constructive criticism, and will doubtless awaken the public to the necessity of better and more up-to-date hospital management. These reforms can be accomplished only through the interest of the people themselves, for they are the supporters of the hospitals.

Following Dr. Bowman, Fr. Charles B. Monlinier will speak. He is Regent of the Marquette Medical School, in Michigan, and is also President of the Catholic Hospital Association. He has the backing of Cardinal Gibbons. Whenever Fr. Monlinier goes into a Catholic hospital and tells them what they need and what they must do, they get it and they do it.

The meeting promises to be a very interesting one, and is in line with the endeavor of the President of the Hennepin County Society, Dr. J. C. Litzenberg, to improve hospital conditions in Minneapolis.

Not only the entire membership of the Hennepin County Medical Society is asked to attend, but the invitation will be extended to the superintendents of hospitals, the head nurses, and probably, too, the boards of directors.

Every man of us is anxious to see Minneapolis in the foreground in hospital work, even though it hurts us to hear the truth, now and then, if it reflects upon the present condition of our hospitals.

A DEARTH OF PHYSICIANS

The Bureau of Information, conducted during Clinic Week, for the purpose of finding locations for physicians, especially those returning from army service, as well as finding physicians for communities without medical service, served a useful end, and accomplished some immediate results. The number of applications to the Bureau, made personally or by letter, was large, and revealed a dearth of men to fill vacancies in the Northwest.

At the close of Clinic Week the correspondence, with the work of the Bureau generally, was turned over to THE JOURNAL-LANCET; and all the information will be furnished our readers through the department of items at the end of our news items.

The editor desires to say a word about this

department, which has been conducted at no small expenditure of time and effort. Many girls have been found for office assistants; laboratory technicians, for whom there is a growing demand, have been obtained; men for substitute work (locum tenens) have been supplied; assistance in the sale of practices, and in finding men for towns without physicians, etc., has been very helpful.

We shall be glad to do all in our power to make this department of real value to our readers and to the public.

We cannot refrain from issuing warning to men who, as our correspondence in this line unmistakably shows, are rushing into the specialties without sufficient preparation in the form of postgraduate work or without adequate experience in general practice. Many of the present-day evils of medicine are due to these conditions; and the reaction will be harmful to the low-grade men in the specialties.

NATIONAL CONFERENCE ON SOCIAL WORK

Of particular interest to physicians will be the sessions on "Health" and "Mental Hygiene," at the National Conference of Social Work to be held at Atlantic City June 1-8. The chairman of the health program is Dr. C. E. A. Winslow, Professor of Public Health at Yale University Medical School, Major Frankwood E. Williams of the National Committee for Mental Hygiene will be chairman of the Mental Hygiene program, with Dr. C. Macfie Campbell, of Johns Hopkins Hospital, as vice-chairman.

Under the general theme "Health and the Standard of Living," the problems of tuberculosis, infant mortality, industrial and venereal diseases, will have special sections for their discussion. Specialists in the fields of medicine and social work will address each of the seven groups. The committee on Mental Hygiene has also arranged a program of a general session, and seven sectional meetings. Col. Thomas W. Salmon, Medical Director of the National Committee for Mental Hygiene, will address the general session on "Failure of Adaptation as Revealed in Military Life."

This is one of the most significant conferences of the year. About four thousand representatives have already made reservations, and it is hoped that many others interested in the development of social work will attend. Frank J. Bruno, 611 Kasota Bldg., Minneapolis, who is State Secretary for the Conference, will be glad to send programs and rates to anyone desiring information.

AN EFFECTIVE BARRIER TO THE HOUSE FLY

A simple common-sense way of doing things is sometimes more efficient than a very elaborate way; and yet it is sometimes difficult to gain the attention of men to the simple and the efficient, while they are earnestly seeking an end through elaborate means.

A friend tells us that scarcely a dozen flies have been seen annually in his house for a number of years; and he says that he has made special efforts to get public-health organizations in their campaigns of "swat the fly" to make known to the public his simple remedy of prevention, but he has failed to interest one of them. Now, he says, the self-constituted "swat-the-fly" organization be ———.

The remedy is a simple screened vestibule at each door of a residence, or simply at the kitchen door. Such vestibule need not be over eighteen inches deep, but it must have screened sides and top. As flies are attracted solely by odors and, in cool weather, by heat from the house, they will gather on the sides and top of the vestibule and not at all on the door. This is because the heat from the rooms, and especially the odors and heat from the kitchen, pass off through the sides and top, and not through the screen door. However thick flies may be on the sides and top, opening the screen door, however frequently, will not permit the entrance of flies into the room.

Such a vestibule at the kitchen door is sufficient for any residence not near a barn or other breeding-place for flies.

A screened vestibule three feet deep at the kitchen door of a farm house, and a like one at the other entrance door most used, will keep almost every fly out of the house, and will do so even though the door is kept much open by the wind when strong enough to overcome the ordinary coiled spring used on screen doors.

NEWS ITEMS

Dr. A. F. Gosslee has moved from Pillager to Backus.

The new St. Olaf's Hospital at Austin, was opened last month.

Dr. E. H. Nelson has been appointed health officer of Chisholm.

Dr. J. M. Rains was elected health officer of Willmar last month.

Dr. E. C. Walker, a graduate of Toronto, has located at Napoleon, N. D.

Dr. W. H. Harris, formerly of Potosi, Wis., has located at Powers Lake, N. D.

Dr. H. G. Knapp was re-appointed health commissioner of Minot, N. D., last month.

Mankato's new health officer, Dr. A. A. Wahlrabe, will conduct a crusade against impure milk.

Dr. A. G. Moffatt has moved back to Howard Lake, after practicing several months at Litchfield.

Dr. A. G. Sund, of Minneapolis, a lieutenant in the Navy, died last week in Colorado Springs, Colo.

The North Dakota State Nurses' Association held its annual meeting in Fargo, N. D., last month.

Dr. Charles S. Raadquist, of Hibbing, was married last month to Miss Pauline Swanson, of Warren.

The Cokato Hospital re-opened its doors on May 1, and it is hoped capable nurses can be obtained.

Dr. W. B. Roberts, of Minneapolis, has moved his office from the Pillsbury to the La Salle Building.

Dr. E. R. Barton, of Minneapolis, has moved his office from the Pillsbury to the La Salle Building.

The Litchfield Hospital, of Litchfield, is to be enlarged by an addition that will have a capacity of twelve rooms.

Dr. F. A. Thyrsell, of Hawley, is to become a member of the firm of Drs. Humphrey & Gosslee, of Moorhead.

Twenty-seven graduate nurses took the examination last week for certificates of registration in North Dakota.

Brown, Nicollet, Redwood, and Watonwan Counties are considering building a joint tuberculosis sanatorium.

Dr. H. T. Sherman has moved from Monticello to Minneapolis, with offices at the corner of Lake St. and Cedar Ave.

Dr. D. A. Fisk, of Carpio, N. D., has become associated with Drs. Ewing & Ewing, of Kenmare, in the same state.

A children's hospital is talked of for Minneapolis. The charitable women of the city have the matter under consideration.

Dr. Horace Newhart, of Minneapolis, spoke at the recent meeting of the Clay-Becker County Society on the care of the tonsils.

Dr. H. P. Dredge, of Sandstone, who has been taking a course in eye, ear, nose, and throat work in Chicago, has resumed his practice in Sandstone.

Dr. E. O. Giere, of Watertown, S. D., donated $1,000 to St. Olaf's College at Northfield, Minn., toward the cost of a new science hall.

The friends of Dr. J. W. Andrews, of Mankato, are talking of running him for Congress. Dr. Andrews is an old political war horse.

Dr. DeW. Townsend, of Belgrade, has completed a course of postgraduate work in New York City, and has returned to his practice.

Dr. Arthur T. Mann, of Minneapolis, will read a paper before the South Dakota State Medical Association at its annual meeting next week.

Dr. R. I. Hubert, of St. Paul, was elected last month to succeed the late Dr. Renz as assistant city health officer. The salary is $2,500 a year.

Dr. C. F. Morseman, who has been studying in the east and is now doing special work in Chicago, will return to Hibbing in the early fall.

Dr. Mabel Ulrich has been appointed a member of the Minneapolis Public Welfare Board, a new body to administer the city health and hospital work.

Dr. R. N. Jones, formerly connected with the Eitel Hospital, has returned from Army and Navy Hospital at Hot Springs, Ark., and located at Gaylord.

Dr. J. F. Paddleford, who was practicing near Miller before entering the Medical Corps, in which he held the rank of captain, will locate in Miller, S. D.

The Oakland Park Sanatorium for the tuberculous, located at Thief River Falls, has a waiting list at the end of its first year. It had fifty-five patients last year.

The School of Nursing of the Swedish Hospital of Minneapolis will graduate a class of twenty-five nurses who have taken the full three-year course of training.

Dr. B. R. LeRoy, of the Minnesota State Health Laboratory, with headquarters at the University, has resigned his position, and has gone to New York City.

Dr. H. L. Ulrich, of Minneapolis, who has recently returned from medical service in the army, has resumed his practice which is confined to internal medicine.

Dr. Stanley Kneeshaw, a former University student, now in France, has received his commission of major. He was recommended for promotion before the armistice.

Dr. Auten Pine, of St. Paul, president of the Minnesota Medical Woman's Association, is chairman of the association to raise funds to support hospitals and physicians in Siberia.

Dr. Clifford E. Henry, who organized the first naval medical unit in the Northwest, has returned to Minneapolis. He was commissioned lieutenant commander and served fourteen months.

Grand Forks is making elaborate preparation for the entertainment of her guests, the members of the North Dakota State Medical Association, which is to meet in that city on the 24th and 25th of June.

Dr. L. N. Werner, of Red Wing, who has been acting as surgeon at the Rood Hospital, in Hibbing, the past six months, in the absence of Dr. Rood, has resumed his practice in Red Wing.

The remainder of the medical staff of Hospital Unit 26, generally known as the University Unit, and mainly from the Twin Cities and Rochester, returned this month from Allerey, France.

Dr. B. J. Gallagher, of Waseca, who spent nearly a year in a German prison camp, will address the South Dakota State Medical Association at its annual banquet on Wednesday evening of next week.

The Cass County (N. D.) Chapter of the Red Cross has been conducting a course in elementary hygiene and care of the sick at Fargo. Certificates were given to twenty women who passed the examination.

Dr. John H. Schroeder, of Minneapolis, died early in May at the age of 33. Dr. Schroeder was a graduate of the State University, and took his degree in medicine in 1916, and has been a member of the University Medical School faculty for some time.

The second annual report of the Buena Vista Sanatorium, for the tuberculous, shows that the average cost per day per patient was $2.12. The total expenditure per year was $14,345, of which over one-half was received from patients.

They called him "Major" Seelig, "Dr. Major" Seelig, "Major Major" Seelig, and "Colonel Major" Seelig. His parents made him "Major" Seelig, and the Government gave him the other titles, except "Dr.," for his efficient service in the Medical Corps.

Dr. Dwight Silliman, of Hibbing, died last month at the age of 78. Dr. Silliman was a graduate of the Hahnemann Medical College of Philadelphia and of the New York University Medical College. He practiced in Hudson, Wis., for forty years.

Dr. E. C. Davis of the Lake Julia Sanatorium has resigned as superintendent, and gone to Eagle Butte, S. D., to become superintendent of the general hospital at that place. He is succeeded in the Lake Julia Sanatorium by Dr. G. B. Bushee, of Chicago.

Dr. C. C. Leck is home from the army, and has resumed practice at Austin. Dr. Leck held a captain's commission and was chief of the medical service at the port of embarkation at Secaucus, N. J., and chief of the service at the Port Hospital in Brooklyn.

Dr. C. J. McGurren, of the North Dakota State Board of Health, has been appointed by the U. S. Public Health Service State Medical Examiner of state applicants for compensation from the Washington Bureaus of War Relief. Devil's Lake will be Dr. McGurren's headquarters.

Dr. M. Sullivan, who practiced at Adrian for many years, recently moved to Minneapolis. His removal was announced in these columns, and it was said he would continue practice here. Dr. Sullivan informs us that he has retired from practice, and that he is "trying to forget the past."

Dr. Carmelia, of the U. S. Public Health Service, was in North Dakota ten days ago to consult with the State Board of Health upon the railroad water supplies of the state. He was met by Dr. C. J. McGurren, of the State Board of Health and by Drs. A. G. Long and A. Mendelsohn, of the University.

The Southern Minnesota Medical Association will hold its midsummer meeting at Rochester on June 23 and 24, changing the date from June 30 and July 1, hitherto announced by the Society.

The following distinguished men will address the meeting: Dr. Willy Meyer, of New York; Dr. Arthur Dean Bevan, of Chicago; Dr. John Prentiss Lord, of Omaha; and Dr. Robert Jones, of Liverpool, England.

Dr. J. Frank Corbett, of Minneapolis, has returned to the city from service in the Walter Reed Reconstruction Hospital at Washington, D. C. Dr. Corbett was chief of the Division of Head and Peripheral Nerve Surgery, and had done like work in the Government hospital at Cape May before going to Washington about Jan. 1st.

Lieut. E. T. W. Boquist, of the Navy Medical Corps, was married on April 30 in New York City to Miss Elizabeth Bacon, of New York. Dr. Boquist was a 1916 graduate of the Medical School of the University of Minnesota, and was house surgeon at the Swedish Hospital when he promptly responded to the first call, in 1917, for medical men. He will continue his service on the transport Graf Waldersee.

Yankton, S. D., has gone under commission government, and it distinguished itself by electing Dr. Jennie C. Murphy a member of its first commission. She is the first woman in the state to hold such office, and she holds it by virtue of the largest vote given any member of the commission. Her peculiar fitness for such work will no doubt show itself in the interest of Yankton's citizens. We offer our congratulations to both Dr. Murphy and the citizens of Yankton.

Dr. H. M. Bracken has tendered, or will soon tender, his resignation as executive officer and secretary of the Minnesota State Board of Health. He was *forced* out of the Minnesota work—to assume a larger work under the Government, namely, to become Superintendent of the Tenth District of the United States Public Health Service, with headquarters in the Twin Cities. The District is composed of Minnesota, South Dakota, North Dakota, and Montana. The superintendent will be known as "Surgeon" H. M. Bracken. Our warmest congratulations go out to "Surgeon Bracken."

THIRTY-EIGHTH ANNUAL MEETING OF THE SOUTH DAKOTA STATE MEDICAL ASSOCIATION

PROGRAM

WEDNESDAY, MAY 21ST, 9:00 A. M.

1. Pyelitis in General Practice. Dr. J. P. Isaac, Freeman, S. D.
   Discussion opened by Dr. D. L. Rundlett, Sioux Falls, S. D.
2. Catabolism of Disease. Dr. B. T. Green, Brookings, S. D.
   Discussion opened by Dr. J. C. Shirley, Huron, S. D.
3. The Clinical and Pathological Features of Spontaneous Rupture of the Heart. Dr. J. C. Ohlmacher, Vermillion, S. D.
   Discussion opened by Dr. C. E. McCauley, Aberdeen, S. D.
4. Lessons to Be Learned From Draft Examinations. Dr. F. A. Spafford, Flandreau, S. D.
   Discussion opened by Dr. F. M. Crain, Redfield, S. D.

WEDNESDAY, MAY 21ST, 2:00 P. M.

5. President's Address. Dr. D. L. Scanlon, Volga, S. D.
6. Osteomyelitis in Camp Hospital. Dr. W. O. Leach, Huron, S. D.
   Discussion opened by Dr. J. D. Whiteside, Aberdeen, S. D.
7. Compound Fractures of the Femur, from Experience in French War Hospitals. Dr. O. R. Wright, Huron, S. D.
   Discussion opened by Dr. W. R. Ball, Mitchell, S. D.
8. Military Experiences in Camp. Dr. M. C. Johnston, Aberdeen, S. D.
   Discussion opened by Dr. D. W. Craig, Sioux Falls, S. D.

THURSDAY, MAY 22D, 9:00 A. M.

9. Leukocyte Count in Chronic Tonsillar Infection. Dr. J. M. Walsh, Rapid City, S. D.
   Discussion opened by Dr. E. D. Putnam, Sioux Falls, S. D.
10. Oto-Laryngology and the Mortality-Rate. Dr. J. G. Parsons, Sioux Falls, S. D.
    Discussion opened by Dr. A. E. Johnson, Watertown, S. D.
11. The Mastoid Operation. Dr. H. I. Lillie, Rochester, Minn.
    Discussion opened by Dr. L. G. Hill, Sioux Falls, S. D.
12. Myomectomy and Hysterectomy. Dr. E. O. Giere, Watertown, S. D.
    Discussion opened by Dr. S. M. Hohf, Yankton, S. D.

THURSDAY, MAY 22D, 2:00 P. M.

13. Empyema and Some Surgical Complications of Influenza. Dr. Arthur T. Mann, Minneapolis, Minn.
    Discussion opened by Dr. T. F. Riggs, Pierre, S. D.
14. Surgical Treatment of Gastric Ulcer. Dr. R. L. Murdy, Aberdeen, S. D.
    Discussion opened by Dr. B. A. Bobb, Mitchell, S. D.
15. Medical Treatment of Gastric Ulcer. Dr. Owen King, Aberdeen, S. D.
    Discussion opened by Dr. M. H. Ebert, Webster, S. D.
16. Operative Treatment of Prolapsus Uteri. Dr. M. A. Stern, Sioux Falls, S. D.
    Discussion opened by Dr. H. J. Bartron, Watertown, S. D.

LOCUM TENENS WANTED

A Minneapolis physician wants a man to care for his practice for two weeks, beginning June 6. Salary basis. Address, 240, care of this office.

X-RAY AND CLINICAL LABORATORY WANTED

An Iowa city of 8,000, with twelve physicians, needs an *x*-ray and clinical laboratory. A good man can do well in this line. Address 240, care of this office.

LOCUM TENENS WANTED

A South Dakota physician wants a doctor to take charge of his work for the month of June. Please state your qualifications and experience. Address 236, care of this office.

PHYSICIAN WANTED

In a new town, 55 miles northeast of St. Paul in Wisconsin, in a very thickly settled country. Nearest physicians 8 miles east and 12 miles west. For particulars address 225, care of this office.

HOUSE CALLS FOR BLOOD EXAMINATIONS

An Internist who has had good training and experi- services to make house calls in the city for blood examinations and other pathological work. Call "Pathologist," M. 1573 or Dial 32 503.

LOCUM TENENS WANTED

For at least two months beginning about June 20, for general practice in county-seat town in South Dakota. Must be capable and able to handle anything in general work. Give references. Address 239, care this office.

PRACTICE FOR SALE

Combined surgical and general practice in good southern Minnesota town of 3,000, excellent hospital, $12,000 business. Combination house and office to sell, thoroughly modern. Good reason for selling out. Address 237, care of this office.

WANTED—AN INTERNIST AND A RÖNTGENOLOGIST FOR GROUP PRACTICE.

A Internist who has had good training and experience to head the department of medicine for group practice; and also a Röntgenologist who is similarly qualified for the *X*-ray department of such group. In a city of 15,000. Address, 243, care of this office.

WANT AN ASSISTANTSHIP LEADING TO A PARTNERSHIP

By a married man, aged 32, graduate of Jefferson, Class of '10. Has done general practice with some surgery. Army experience with British expeditionary force. Best of references. Prefer a hospital town with a man doing some surgery. Address 231, care of this office.

LABORATORY TECHNICIAN AND *X*-RAY OPERAOR WANTED

A firm of surgeons in one of the large cities of South Dakota wants a technician who can do all kinds of laboratory work, including Wassermanns, etc., and *x*-ray work. State what experience you have had, and also salary desired. Address 235, care of this office.

POSITION AS LABORATORY TECHNICIAN WANTED

By a young woman with splendid educational background and eighteen months' experience in a large clinical laboratory; capable of doing complete urinalysis, blood counts, blood chemistries, sputa, gastrics, bacteriological examinations, frozen and parafin sections, and Wassermanns. Address 230, care of this office.

WANTED—SALARIED POSITION WITH PARTNERSHIP IN VIEW

By a married man, 36 years of age; graduate of the University of Michigan (1907); ten years' general experience; one and a half years in Army Service. Prefer town with hospital facilities. Licensed in Minnesota and North Dakota. Will do locum tenens work for three or four months. Address 241, care of this office.

INSTRUMENTS, BOOKS AND FURNITURE FOR SALE

The instruments, books, and some furniture of the late Dr. Renz, of St. Paul, are offered for sale. The instruments are, in the main, the smaller ones. They are plated with German silver, and are in excellent condition. The books are largely standard German texts of large value. They may be seen by calling up Dr. John V. O'Connor, Lowry Building, St. Paul.

PHYSICIANS' PRESCRIPTION BOTTLES FOR SALE

French square 8-ounce bottles, packed in 1½-gross cases, at $4.50 per gross or $6.75 per case. In 5-case lots, $4.25 per gross, in 10-case lots, $4.00 per gross. We also have a few gross each of 2-, 3-, 4-, 8-, and 16-ounce round and square prescriptions. Prices quoted on any size or quantity wanted. Address Wm. Painter Company, 1417 Washington Ave. S., Minneapolis.

PRACTICE FOR SALE

In a prosperous Minnesota town of 500, people of German descent predominating. On the main line of the Northwestern Railway and the terminal of a branch line. Competition from other towns not great. Town has electric lights and water system, and on a federal road. Good schools. Have a small six-room house, two autos, and good office equipment, and autos are optional. Business is good and can be increased; collections, excellent. Good reasons for leaving. Price, moderate. Address 234, care of this office.

PRACTICE FOR SALE

South Dakota practice, in southeastern part of state, practice running $8,000 to $10,000 a year. To purchaser of modern office equipment and office-residence located on three lots and including barn and garage. Beautiful improved country, fine people, collections excellent. Sacrifice price $7,000 with payment of $2,000 down and good time. Equipment includes *x*-ray and good supply of drugs. Don't write unless you have the money and want a good location. Reason for leaving, condition of health. Address 238, care of this office.

PUBLISHER'S DEPARTMENT

SAL HEPATICA

This effervescent saline combination of laxative and and eliminant is said to have a larger sale than any other specific drug preparation on the market, and this sale is very largely among medical men for their personal use No higher words of commendation can be obtained by any remedy used for a specific purpose

NUJOL IN CONSTIPATION

The necessity of elimination, of continuous limitation in the case of stagnant bowels, is, of course, recognized by all physicians; but the evils of most cathartics are often worse than the constipation, especially if persisted in to the impairment of the bowels' peristaltic function.

A lubricant, in almost all cases, does the work much more satisfactorily, and does it without a particle of harm. Such a lubricant is Nujol, which is a petroleum product manufactured by the Standard Oil Co., with the guarantee of this great corporation back of it.

FAIRVIEW HOSPITAL

The above-named hospital is one of the most modern hospitals in the city, the building itself approaches perfection in hospital construction, and its site (it is on the bank of the Mississippi in a quiet zone of Minneapolis) is superb. Its equipment is also of the highest quality.

The patronage of Fairview is very large. It maintains a training school for nurses, and makes very reasonable charges for its patients.

Physicians and surgeons visiting Minneapolis will be cordially welcomed in their visits of inspection of this hospital.

INSECT BITES

While on a hunting trip in Northern Canada I was severely bitten with black-flies—those diminutive devils of the Northern Woods. As it was quite late in the season we thought it unnecessary to take precautions against flies and mosquitoes, and I had no treatment for several days other than applications of bicarbonate of soda.

At one of the Hudson Bay posts and in Toronto, physician friends made applications endeavoring to give me relief, but without any success. After several days my face and hands were swollen to about twice their normal size; the pain and itching were almost unbearable. At Toledo, Ohio, one of my physician friends took charge, and for several days did his utmost to stop the action of the poison, and as a sort of hopeless last resort proposed trying Antiphlogistine. Having been without sleep for about two weeks and with the nervous system almost completely shattered, I was willing to give anything a trial.

The first application stopped the burning, and several more completely reduced the swelling, after the combined efforts of these three friends had failed to afford me a particle of relief.

I have gone into this rather extensively in the hope that some other sufferer who is susceptible to insect bites may be prepared and not forced to undergo any such amount of distress as I did.—Dr. I. W. Copeland, Ashland, Ohio.

THE RIVER PINES SANATORIUM

The tuberculous patient who enters this institution is at once inspired with confidence that he has before him all that institutional treatment can offer; and if he knows, as every tuberculous patient should know, that such treatment offers him the only sure hope of betterment or cure—such patient is started on the road to recovery. Moreover, he will find no disappointment here, for the institution has already made its name in the medical profession as a wholly dependable sanatorium for the tuberculous.

It is a pleasure to speak words of high praise for the River Pines Sanatorium, of Stevens Point, Wis.

GOOD BUSINESS METHODS FOR BOTH THE BUSINESS MAN AND THE CUSTOMER

However skillful an optometrist and optician may be, he will sometimes find the glasses he makes for a customer not doing their work at times, not giving the satisfaction expected, especially by one using glasses for the first time.

The Kindy-Knapp Company, of 719 Nicollet Ave., Minneapolis, meet this condition by notifying every new customer that the Company is *anxious* to make every pair of glasses give perfect satisfaction, and the customer who returns for further adjustment of glasses that do not seem just right confers a *favor* upon them.

That tells why customers like this house.

JORDAN SULPHUR SPRINGS AND MUD BATH SANITARIUM

We somethimes feel that many of the medical profession have not learned as much about Minnesota's sulphur springs and mud baths as have the laity. The above-named institution, for instance, adopts no quack methods in its announcements or its method of treatment. It first cures up a whole lot of chronic cases of rheumatism, gout, constipation, eczema, etc., that physicians deal with in vain. It almost always gives quick relief, and not infrequently makes permanent cures.

The Sanitarium is under the management of Mr. J. J. Leonard, and physicians need never hesitate to send patients to it.

It is located at Jordan, Minn.

"THE SURGICAL EYE."

The Lincoln Rubber Co., of Akron, Ohio, set a standard for surgeons' rubber gloves when they adopted the above descriptive term for their own gloves. A great surgeon is an excellent operator who has great surgical judgment, and such judgment often depends solely upon information obtained by the gloved finger on the concealed tissues of the body. If that touch is reduced one iota by the rubber tissue of a glove, surgical judgment in that case is an unknown quantity. If, on the other hand, the gloved finger can see, as it were, the surgeon's judgment is in nowise hampered.

The "Knucklfit Gloves" of the Lincoln Rubber Company, distributed in the Northwest by Messrs. Noyes Bros. & Cutler, "don't blind the surgical eye," located in the tips of the fingers.

THE BEEBE LABORATORIES

The Beebe Laboratories of St. Paul are manufacturing autogenous vaccines on a large scale, and physicians who use such vaccines intelligently are getting the most favorable results, if not often saving life, after all their therapeutic skill in other lines have absolutely failed.

It is very gratifying to a physician who has made an absolute failure in the treatment of a case of furunculosis, acne, or cystitis, to find that an autogenous vaccine, properly prepared, will produce a rapid cure; and yet this is a common occurrence with physicians who use these vaccines. The Beebe Laboratories will be glad to correspond with any physician who seeks information in this line, and will furnish literature that is absolutely convincing as to the results obtained by men of high standing who have used these vaccines extensively and for years.

THE EITEL HOSPITAL

The Eitel Hospital of Minneapolis has grown in popularity since the day it was opened, and the reasons for its prosperity are not difficult to find. Its location, facing beautiful Loring Park, is superb; its building and equipment closely approach the ideal in hospital construction and arrangement; and its management from the opening day until the present has been pleasing to every patient, while no demand of hospital life has been ignored for the sake of pleasing a favored or a cranky patient.

Some of these points of excellence in a hospital may be attained, and yet leave around and through the hospital an atmosphere that is unpleasant and that militates against that success for which hospitals are conducted, namely, the best interests of their patients.

It is the personnel of the Eitel Hospital—from the chief of staff, the superintendent, and the head nurses down to the student nurse and the young women in the office—that gives this hospital a home atmosphere, felt by the sickest patient with a private nurse and by the young mother, whose fears are often terrifying.

Every doctor visiting the city should see the Eitel Hospital, both from without and from within.

DR. A. PARKER HITCHENS

From Indianapolis comes the announcement that Dr. A. Parker Hitchens, one of the foremost bacteriologists in the United States, has accepted an appointment as associate director of the biological division of the Lily Laboratories.

Dr. Hitchens was associated with the H. K. Mulford Company for eighteen years, and during the last ten was director of its biological laboratories. In 1918 he was commissioned a major in the medical corps and took up his duties in Washington at the Army Medical School, devoting practically all of his time to a study of influenza. Upon discharge from active service he was commissioned Lieutenant Colonel in the Medical Reserve Corps.

Dr. Hitchens has been secretary of the Society of American Bacteriologists for a number of years and is editor of the organization's publication, "Abstract of Bacteriology."

ANASARCIN

There is hardly a symptom that deserves more careful and constant attention on the part of the physician than dropsy. While dropsy is a symptom, it is at the same time a condition, which calls for careful treatment. Dropsy means effused fluid, which cannot always be safely or satisfactorily removed either by tapping or by the administration of hydrogogue cathartics, diaphoretics, or the administration of diuretics of the ordinary kind.

Such means generally weaken the patient, and do not get to the root of the trouble, because effusion of fluid into the tissues or circulatory stasis results. It is more rational, safer, and more satisfactory to secure resorption of such effused fluid by overcoming circulatory stasis, increasing the contractile power of the heart, toning up the vascular system and acting upon the secretory power of the kidney in such a way as to stimulate it without exhausting it. For this purpose a combination of indicated agents under the name of Anasarcin Tablets and Anasarcin Elixir has for a number of years been upon the market and in the hands of thousands of physicians and has proven not only efficient but safe.

Anasarcin does not possess cumulative action, does not disturb digestion, does not irritate the kidney; hence it may be administered in a sufficient dosage and for an adequate length of time to secure satisfactory results.

Interesting literature and samples of these products will be sent to any physician on request to the Anasarcin Chemical Co., Winchester, Tenn.

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SYMPOSIUM ON INFLUENZA AND ITS PNEUMONIAS*

In TWO PARTS—PART I

H. E. ROBERTSON, M.D.; W. P. LARSON, M.D.; T. A. PEPPARD, M.D.; E. L. GARDNER, M.D.; A. A. LAW, M.D.; A. T. MANN, M.D.; J. D. LEWIS, M. D., and C. E. NIXON, M.D.

PATHOLOGY, WITH DEMONSTRATIONS

BY H. E. ROBERTSON, A.B., M.D.
MINNEAPOLIS

In the fall of 1916 there occurred in the army an epidemic of purulent tracheobronchitis, which was supposedly caused by the influenza bacillus. In 1917 in the American Expeditionary Forces training-area there occurred a similar epidemic, in which the influenza bacillus seemed to be the primary etiological agent and which was a purulent tracheobronchitis with bronchopneumonia. The chief clinical signs of this disease were dyspnea, marked prostration without very prominent physical signs, and involvement of the sinuses, with a long, protracted convalescence and a cough which was spasmodic in character, resembling that found in whooping cough.

The spring and summer of 1918 brought on the Spanish "flu," so-called, a very mild form of a three-day fever, which was probably caused by the influenza bacillus. In the fall of 1918 there developed in the American Expeditionary Force and British Expeditionary Force and the rest of the world, including this country, the epidemic of influenza, about which we are still talking.

It was, however, in those cases in the fall of 1917 that we were privileged to see the typical pathology of what we regarded as pure influenza infection, which is considerably different from the pathology of the mixed influenzal infections seen in the majority of cases of the epidemic of 1918. This "pure" influenza is characterized by swelling and infiltration of the mucosa and submucosa of trachea and bronchi, often causing obstruction, and associated with emphysema, both vesicular and interstitial, as well as bronchiectasis. There is also commonly present a nodular type of bronchopneumonia, in which the nodules may resemble miliary tubercles, and in which, microscopically, there is an infiltration of the lumen and walls of the bronchioles, as well as the surrounding alveoli and their walls, the so-called interstitial type of bronchopneumonia.

When the pneumococcus complicates the picture, areas are found suggestive of the stages seen in typical lobar pneumonia and, on the other hand, the streptococcus is often the terminal agent, producing a massive terminal edema with or without hemorrhages. As in almost every case of the disease, these three organisms are involved, the pathological and clinical picture is

*Presented at the second annual meeting of Minneapolis Clinic Week on the afternoon of May 6, 1919.

naturally exceedingly diverse. I am inclined to believe that in many instances the influenza bacillus starts the disease and the other organisms end or complicate it.

(Demonstration of slides showing the lesions characteristic of these three types of bacteria followed.)

FOR DISCUSSION SEE BELOW

BACTERIOLOGY OF INFLUENZA

By W. P. Larson, M.D.
MINNEAPOLIS

The information which I can convey to you regarding the bacteriology of influenza will hardly justify taking up much time. At the time of the outbreak of influenza we all supposed we knew the causative agent. The experiences of the past year, however, have taught us that we know little about the agent at the present time. There are many high-grade bacteriologists who still believe that the so-called Pfeiffer bacillus causes influenza. I think, however, that the consensus of opinion of bacteriologists the world over is, that the old Pfeiffer bacillus probably has nothing to do with this disease.

Many good workers report the isolation of this organism in nigh unto 100 per cent of the cases; other equally good workers fail to find it. The influenza bacillus is found in many conditions. In measles and in many acute respiratory infections we are able to isolate the Pfeiffer bacillus, and yet there seems to be no etiological relation.

Whatever the cause may be, the evidence is at least that few cases of uncomplicated influenza resulted in death from the influenzal infection; that the fatalities are invariably due to a mixed infection, chiefly to the streptococci and the pneumococci. The complications that we encountered here in the Twin Cities were chiefly secondary infections by either the pneumococcus or the streptococcus. When pneumococci were found, Types 2, 3, and 4 prevailed. Where streptococci were present, more of the non-hemolytic than of the hemolytic strains were found.

The germ causing the complications seems to vary with the locality. Some localities report hemolytic streptococci entirely; others report a preponderance of pneumococcic infections. In this connection there is a practical point in regard to our prophylactic therapy, since we will readily see how futile it would be to vaccinate against pneumococcic infections in a locality where the pneumonias were caused by streptococci or other bacteria.

During the epidemic of the past year the Medical School of the University of Minnesota prepared and distributed somewhat like 400,000 doses of vaccine. I am sorry to be unable to give detailed information as to the result of this vaccine prophylaxis, as the medical men who used the vaccine were too rushed during the epidemic to take time to analyze their results. It is hoped that the data will be available in the near future.

I may here mention our experience with one of the medical classes consisting of about sixty students. Of this class of sixty students more than fifty took the prophylactic vaccine. Of these fifty none contracted pneumonia. Of the remaining ten who did not take the vaccine, more than 50 per cent contracted pneumonia before the epidemic subsided. The experience of this class, as you will see, is decidedly in favor of the vaccine.

If I may once more touch on the causative agent of influenza, I will say that I have come to the conclusion that the germ that causes this infection is probably a filtrable virus. There are no positive data in support of this theory: it is based more on negative findings than any positive work.

DISCUSSION OF THE TWO PRECEDING PAPERS

Dr. Moses Barron (Minneapolis): At the hospital center in France where I was stationed we performed about 400 autopsies. About 90 of these were on cases in which the field medical cards gave a history of influenza. In nearly all of the cases so diagnosed pneumonia was the cause of death. In no case of influenza was death due to the disease itself. From the necropsy studies it is difficult, therefore, to state what the pathology of this disease is.

In this series of 90 cases almost 90 per cent showed pneumonia. The pneumonia was atypical and quite different from the pneumonias which I have seen outside of this epidemic. Most of the cases were bronchopneumonia, some of them very massive. Abscesses were very frequent. There were numerous dilatations of the bronchioles with the development of bronchiectases. Cultures from these cases, taken from the blood, as well as from the lung tissue and pleural exudates, gave positive results for Pfeiffer's bacillus only three times. In these three cases the bacillus was associated with either the streptococcus or the pneumococcus; it

was not found in pure culture. The majority of the pneumonias were due to the streptococcus, either hemolytic or non-hemolytic; others were due to the pneumococcus. The streptococcus hemolyticus was the most frequent causative agent.

Associated with these pneumonias was found a high percentage of sinusitis. About 60 per cent of the cases showed sinus involvement, of which the majority were sphenoidal. Ethmoidal sinusitis was next in frequency, while the involvement of the frontal sinuses was found only half as often as of the sphenoidal. In many cases all the sinuses contained quantities of purulent exudate.

Pleurisies and empyemas were common. The exudate was different from the usual type, in that there was a great abundance of fibrin present. Fibrinous masses as large as one's fist were not uncommon. The ordinary type of empyema with a creamy purulent exudate was relatively infrequent.

Another interesting finding was that of Zenker's degeneration of the recti muscles. A fairly large number of cases were encountered with this condition. The parenchymatous degeneration of the muscles frequently led to complete rupture of the muscle bundles in either the upper or the lower third. Several times these caused great confusion in diagnosis. In one case a diagnosis of acute appendicitis was made, and the patient was scheduled for operation. Because of the severe symptoms manifested by the patient operation was delayed. The patient came to necropsy without operative interference, and revealed an entirely normal appendix. The appendiceal symptoms were explained by the extensive degeneration of the right rectus muscle in the lower third with rupture and hemorrhage.

In another case signs of suppurative cholecystitis developed. There was marked tenderness over the gallbladder region; and an indefinite mass was palpable. Consultation of the surgical and medical staffs of that hospital resulted in a diagnosis of suppurative cholecystitis. Operation was advised. The patient suddenly became comatose and developed edema of the lungs which contra-indicated operation. At autopsy the gallbladder proved to be entirely normal. There was found Zenker's degeneration of the upper segment of the right rectus muscle with rupture and very extensive hemorrhage, between the muscles inside the rectus sheath. It is possible that similar pseudo-abdominal lesions suggesting true surgical conditions developed in many cases as a result of parenchymatous degeneration of the recti muscles.

From the series of cases studied at this center there was no evidence that the bacillus influenzæ bears any etiological relationship to the disease, influenza. From the studies made it was thought that influenza may be defined as an acute infectious, self-limited disease of unknown etiology (probably due to a filtrable virus), which may produce changes in the respiratory tract not unlike those that are produced by measles. In fact, there are many findings in influenza which greatly resemble those of measles. The lesions in the respiratory tract seem to lower the barrier for an infection by invasive organisms, such as the streptococcus, the pneumococcus, or the bacillus influenzæ. The *kind* of invasion will depend upon the type of organism which happens to predominate in any given locality and therefore in the throats of the patients.

Dr. J. W. Andrews (Mankato): I do not rise to discuss this subject, but I desire to ask Dr. Larson or the next speaker what is meant by Types 1, 2, 3 and 4 of the pneumococcus.

Dr. Robertson: I think that question belongs to Dr Larson's department.

I would like to say a word or two, further, however, in regard to the pathology and the bacteriology of epidemic influenza. The clinicians do not materially disagree about the disease. They usually name every possible symptom, and thus give a fairly consistent picture The pathologists and bacteriologists evidently differ about the disease, for one says that the influenza bacillus is probably the fundamental etiological agent, while another says it probably has nothing to do with it; and, as a counter proposal, there is suggested a filtrable virus.

Dr. George Foster, a regular army surgeon, a few years ago discovered that common colds are probably caused by a filtrable virus, and this idea has been applied by other investigators to the subject of influenza. Some experiments have already been published supporting this assumption.

The disease *is* a peculiar one, and it *is* a fact that it does constitute a clinical, pathological, and bacteriological puzzle which has not yet been fully or satisfactorily explained. Possibly a filtrable virus is really the underlying fundamental cause of this disease, and all the other agents mentioned are secondary invaders. However, the close relation which the influenza bacillus evidently bore to the cases examined in the fall of 1917 gave support to the belief that the influenza bacillus at least has something to do with this disease. If it is not the primary cause, it is certainly often a very important etiological factor. This is true even when streptococci and pneumococci are the predominating organisms found post mortem.

Some years ago Dr. Davis, of Chicago, isolated the influenza bacillus from one of his patients, and swabbed with this culture the throat of a student who promptly came down with a typical attack of influenza.

Dr. Larson: In reply to Dr. Andrew's question. By types of pneumococci I mean the types found by agglutination.

SYMPTOMATOLOGY

By T. A. Peppard, M. D.
MINNEAPOLIS

The 1,600 cases of influenza and influenzal pneumonias admitted to the Minneapolis City Hospital from October 1, 1918, to April 1, 1919, furnish the basis for the impressions noted in this paper; and it should be borne in mind that cases of the type received here differed materially from those observed in private practice. Statistics quoted are based on various sized groups thought to be representative.

Males apparently were attacked slightly more frequently than females, the ratio being 56 per cent and 43 per cent, respectively. Age incidence shows the third decade to yield 39 per cent of the cases; the period from 30 to 40, 29 per cent; and 68 per cent of all cases occur in the ages 20 to 40. Sharp division of cases into the respiratory, gastro-intestinal, and nervous types is not thought desirable. It is probable that the incubation period of influenza is short, perhaps two to three days. In our histories a sudden and gradual onset occurred in almost equal proportion, invasion with intermittent symptoms in some. General malaise and general body pains, especially aching in the extremities, are of almost universal occurrence. Chilliness is considerably more frequent than rigor. Feverishness follows, together with headache, often coryza, and other upper respiratory-tract symptoms. Fever usually varies from 100° to 104,° oftenest 101° and 102,° the chart showing diurnal variations of 1° to 2°F. This is sustained usually for five or six days, when it suddenly drops to normal or below. We have not seen the fever continue for longer than nine days in any uncomplicated cases. The pulse-rate is correspondingly slow in proportion to the temperature, usually 90 to 100. Respiration usually is not especially disturbed.

The throat may be dry, occasionally somewhat sore and irritated by the almost constant accompanying cough, which is at first dry and racking, with a sense of oppression, or a racking, with a sense of oppression or pain across the anterior chest, with, later, a whitish or yellowish expectoration. The eye symptoms are commonly burning, itching, and photophobia. Tinnitus occurs less frequently. Epistaxis is sometimes an initial symptom, occurring once; less often perhaps, repeated and profuse. Hoarseness may be an accompaniment of the congestion in the upper respiratory passages. Anorexia is usual. Nausea and vomiting may be slight, or, in some cases, extremely disturbing and persistent during the course or occasionally lasting several days after defervescence. Abdominal pain and tenderness have occurred to such a degree as to be disturbing at times. Constipation is the rule, and diarrhea is relatively infrequent, though noted occasionally. Melana has been observed in one or two severe cases. The bladder symptoms are frequency, burning on micturition, and incontinence, but they are not among the prominent symptoms.

First among the nervous manifestations is the most frequent headache. Delirium and, occasionally, maniacal symptoms have been observed. Psychic disturbances, even in patients with low temperatures, may occur. Vertigo is frequent.

Prostration is marked during and outlasting the acute stage. Involvement of various peripheral nerves may occur. Physical signs include first a picture of a usual acute infection. The general erythema is nearly universal. Conjunctivitis and mild icterus noted in the conjunctiva are most common. The mucous membranes of the mouth and throat are deeply injected, sometimes appearing slightly edematous. Slight enlargement of the cervical glands occasionally is present. Physical signs in the chest show the heart to be negative. At this time no dullness is detected on percussion over the lungs. Scattering, moist, or occasional sibilant râles may be heard over the upper chest; and often suppressed breathing. Aside from perhaps slight diffuse tenderness nothing may be noted in the abdomen. Splenomegaly is the exception. In a few cases roseola, as in typhoid, have been observed.

The laboratory findings are constant. The blood-picture shows a normal or subnormal leucocyte count, with a nearly normal differential formula. The erythrocyte count and hemoglobin are normal at first. Secondary anemia is common during convalescence. Blood cultures are negative, as is the Widal reaction.

The urinalysis constantly shows a febrile type of urine, the specific gravity varying with the amount excreted. A distinct trace of albumin is usually present. Narrow hyaline and granular casts and frequently a red-blood cell are found in a carefully examined sediment. The sputum in our cases was frequently reported as positive for Pfeiffer's bacillus, as well as for

streptococci, staphylococci, and pneumococci. That the total mortality-rate of our hospital cases was 22 per cent is due to the fact that the hospital was necessarily reserved for the severe cases.

It is generally agreed that 4 per cent mortality for total cases is a representative figure.

The most frequent complication occurring with influenza is undoubtedly a bronchopneumonia. Forty per cent of our total cases had pneumonia; 77 per cent of these had pneumonia on admission. Eighty-two per cent showed bilateral pneumonic involvement, only 17 per cent being confined to one side. The mortality-rate of those admitted with pneumonia was 44 per cent. Those developing pneumonia in the hospital showed a death-rate of 31 per cent; 17 per cent died within twenty-four hours, and 38 per cent died within forty-eight hours after admission. Sixty-nine per cent of deaths occurred between the ages of 20 and 50.

Sometimes after a day or two of improvement, the onset of the pneumonia was manifested by an exacerbation of temperature, and the sputum became tinged with blood. Chilliness may be complained of, but there is rarely a distinct chill. The patient looks and feels comfortable, as a rule, and the urgency of a lobar pneumonia is ordinarily not present.

Physical findings at this time will show an impaired percussion note, usually just mesial to the spine of the scapula on either side; the breath-tones, at first suppressed, become bronchovesicular in quality; and a few sharp râles may be heard. Later, definite bronchial breathing is evident. Patches of involvement appear here and there, most frequently posteriorly, rarely anteriorly; and these may spread and coalesce with great rapidity in twelve to twenty-four hours, often after that time giving the appearance of a lobar involvement. Pleural friction is much less frequent than in the lobar types. After five to nine days a few fine, moist râles may be detected; and resolution takes place gradually, a few physical signs remaining often seven to fourteen days or longer after apparent recovery. The termination is by crisis in only 20 per cent, the temperature coming down gradually in 80 per cent of the cases. Certain of the cases are surprisingly toxic with comparatively slight physical findings; others are involved to such an extent that the mechanical embarrassment is outstanding. Edema was not infrequent, but was a formidable feature to combat. Some cases were marked by a migratory type of involvement, which successively involved various portions of the lungs. An occasional case showed signs and symptoms for a period varying up to six or eight weeks. In these we felt that the pathology was chiefly one of abscess-formation.

Effusion into the pleural cavity and empyema form such an important feature that it is discussed separately. Peritonitis was observed in one case without a demonstrable focus of origin. The sequelæ are common. Tachycardia occurs, and, in some cases, is quite persistent. Sinusitis, new infections, and lighting up of latent involvement are of considerable frequency. Otitis media and mastoiditis may occur during the febrile period, and sometimes later.

Of vital importance is the effect that this epidemic is having upon latent tuberculosis, many of the cases dating the onset of their symptoms to their attack of influenza.

FOR DISCUSSION SEE PAGE 280

TREATMENT OF INFLUENZA AND POST-INFLUENZAL PNEUMONIAS

By E. L. Gardner, M.D.
MINNEAPOLIS

The writer's experience has been almost entirely with the hospital patient, especially at the Minneapolis City Hospital. The epidemic struck us as a storm, quickly overflowing the wards, although only the more severe cases were admitted. Since we had patients who, when admitted, were moribund, or had been ill for many days and had developed various complications, the results of treatment have not been as satisfactory as is usual in private practice, where the patient is seen early in the disease.

For the ordinary attack of influenza we have invariably put the patient at absolute rest, not allowing him to get out of bed for anything. Usually, an initial saline cathartic is used, the patient encouraged to drink plenty of water and fruit juices, and eat sparingly, and symptomatic treatment is employed. For the headache the icecap has been most satisfactory. Quinine and the salicylates have been used in parallel cases, but, except for relief of symptoms, the course of the disease has not been shortened nor the com-

plications made less frequent. Coal-tar preparations, we believe, are contra-indicated because of depression. In all cases we have insisted upon proper drainage from the nose, very frequently using adrenalin spray for the purpose. When the catarrhal condition begins to reach the larynx and trachea we think that the alkaline expectorants, such as potassium acetate and citrate, have given relief from the harsh irritating cough. Opiates have been used sparingly, and then only in cases where sleep is a necessity. We have not been convinced of the value of creosote and allied preparations, and they upset the digestive tract. The important part of treatment is hygienic by favoring elimination by the skin and especially the kidneys. The patient should be kept in bed at least three days after the temperature is normal, and, if there is severe exhaustion, for a week. Convalescence is sometimes hastened by the usual tonics.

Post-influenzal pneumonia is the complication which must always be kept in mind. The best preventive is the proper hygienic and eliminative treatment of the catarrhal upper respiratory infection. Several observers have noticed that influenzal patients are more likely to develop pneumonia in the lung which is dependent, and therefore the patients probably should be encouraged to turn frequently. The majority of pneumonias have developed in patients who have not had absolute rest in bed during the initial febrile period and the few days which follow defervescence. The latter stage of subnormal temperature and low resistance should be spent in bed. Any sudden chilling or exhaustion allows the growth of secondary invading organisms, development of a bronchiolitis, and a subsequent bronchopneumonia.

The treatment of the pneumonia requires infinite attention to detail. The difference between good and indifferent treatment consists not in the choice of drugs, but in careful nursing, absolute rest, proper feeding, and elimination from the skin, kidneys, and bowels. Too much therapy may do harm. There should be a definite indication for each drug used. No direct treatment, unless specific therapy, to be discussed later, has proved to be of value. The question of open-air treatment has been a disputed one. We believe that the patient should have plenty of fresh air, but should be guarded against chilling. These patients often complain of feeling worse when chilled, and the dyspnea and cough are aggravated. In a recent report from Camp Wheeler (Dr. George Douglas Head) the mortality was 13.9 per cent up to November 24. From that date the patients were not placed in cold, open porches and wards, but were kept where it was warm; and the mortality decreased to 3.2 per cent.

Hydrotherapy is important. Fluids and fruit juices should be forced until the urine output for twenty-four hours is well over 1,000 c.c. Proctoclysis or hypodermoclysis may be necessary in severe cases. Warm sponge-baths should be used for cleanliness or when the patient is perspiring freely. The cool chest-pack may be helpful in the robust young person, especially when there is pleural pain,—the dyspnea and cyanosis very often improving so much that the patient falls asleep while in the pack.

We have used drugs only when indicated. Digitalis, camphor, caffeine, ammonia, and strychnine—all have their special indications. The routine use of digitalis is capable of doing harm, but where the heart is dilating or where there is fibrillation it should be forced to the limit in massive doses (Eggleston method). When we have severe toxemia, in spite of good elimination, a few well-chosen drugs may be of value. Where there is vasomotor weakening with falling blood-pressure, abdominal distension, and excessive sweating, surgical pituitrin in small (0.25 c.c.) doses, repeated often enough to obtain the desired effect, has been, we believe, the most satisfactory. Overdosage must be guarded against because of secondary depression.

In acute pulmonary edema where the heart is dilating venesection may be life-saving. If purely toxic edema occurs, small repeated doses of adrenalin (0.125 to 0.25 doses) every half hour very often give marvelous temporary benefit, and occasionally possibly save life.

Should opiates be used during the course of the pneumonia? I have seen disastrous results where morphine or codeine has been used in the ordinary doses. In severe cases, especially those with the dusky cyanosis, where there is methemoglobin formation, one-half or even one-fourth of the usual dose may give the maximum therapeutic effect. Opiates must be used in cases which do not rest after other measures have failed to quiet them, for a patient may wear himself to exhaustion if not relieved. The hypnotics have not been used except in unusual cases because of the depression which often follows.

Time will not permit us to consider drug therapy in more detail. Let us review briefly the

value of "specific" vaccine and serum treatment. Since the infecting organism of influenza is unknown, no scientific vaccine is possible. No vaccines have to date proved their efficacy. The anti-pneumonia vaccines of Larson and also of Rosenow have both probably afforded some protection against complicating pneumonias. Their use is rational because they are made from numerous strains of organisms from patients who have had or have died of pneumonia following influenza. They are contra-indicated in anyone who at the time has a respiratory infection, is running a temperature or at the premenstrual period in women. Following the injection of vaccine or any other foreign protein there is a period of relatively decreased resistance for twenty-four to forty-eight hours—the so-called negative phase. Some of the worst pneumonias which the writer has observed were in those who had taken the vaccine during the early febrile stage of influenza. The period of possible immunity following anti-pneumonia vaccination is short, probably averaging around two to four months.

The partially autolysed vaccine of Rosenow, and other antigens, especially those of pharmaceutical houses, have been used by a few physicians during the influenza to prevent pneumonia. The body during an acute influenzal attack is doing its best to build up its immunity, and it seems from the theoretical standpoint an inopportune time to try active immunization. It simply adds fuel to the fire. Those who use it do so without thinking or with the idea that an active immunity may be produced before pneumonia has had a chance to develop. Vaccine or any other bacterial antigen during the pneumonia itself probably does no good; from clinical and laboratory evidence there are indications that harm may result.

Only one type of specific treatment employed to date has a sound theoretical basis: that is the use of serum, plasma, or whole blood from convalescent pneumonia patients. Since the pneumococci found in these pneumonias have not fallen into the Type 1 and Type 2 classes, as described by Cole, but have been "atypical," horse serum has proved a failure. However, a patient who has recently recovered should have antibodies present against the organisms which caused the pneumonia. If another patient with a similar pneumonia were transfused, using the convalescent patient as a donor, the recipient should receive certain benefit, provided that the same strains of organisms were the cause of the disease in both cases. One objection to transfusion is the probable necessity of matching bloods. By allowing the blood to clot, and injecting only the serum intravenously, a smaller bulk is given; and the removal of the donor's corpuscles prevents, at least, some possible undesirable reactions.

The dose we have employed has been 75 to 100 c. c., repeated every twenty-four hours until improvement. If the serum was potent, usually there was improvement in a few hours, as shown by a drop in temperature and a decrease of the toxemia. In some cases it was apparently so marked that the response was similar to the effect of antitoxin upon diphtheria. At first we were very hesitant to believe that the results were anything more than occasionally occurred in patients who had had no serum, but with more experience we were all convinced of its value. The following points were brought out by our studies:

1. Sera of simple influenza patients had no effect upon pneumonia.

2. Sera of convalescent pneumonia patients varied as to potency—possibly the result of bacterial strains.

3. Pooled sera, or sera obtained from separate patients and injected on successive days, very often gave good results, while serum from a single donor was without effect.

4. Sera of convalescent patients lost potency after three to six weeks, the best probably being obtained from five to fourteen days after defervescence.

5. There was no immediate effect, as a rule, upon the lung findings, but simply a neutralization of toxemia.

6. Patients with high leucocytosis, thus indicating possible complications, did not respond as well as the pneumonias with low leucocyte count or leucopenia.

7. It is not necessary to match bloods. A Wassermann should be taken upon all donors and, if possible, a history and physical examination to rule out syphilis.

8. No reactions were noted except a slight chill and rise in temperature in one patient. McGuire and Redden report chills in the majority of cases, but they used doses much above 100 c. c.

9. The serum is most efficient in the early stages.

With 1,600 cases of influenza up to April 1, 640 patients had pneumonia with definite signs of consolidation. No doubt many more had scattered lobules involved, as no radiographic exam-

ination was made, and the majority of notes were made by the internes, some of whom were senior students. The mortality was 44 per cent, the death-rate being approximately the same for all months. As stated before, the majority of the patients had pneumonia upon admission. Forty-two patients were given one or more intravenous injections of convalescent serum. Nearly all of these cases we thought were critical or moribund. The mortality-rate was 33 per cent, therefore being much lower than untreated cases of similar severity.

In looking over the literature, I have found reports of 297 cases treated by a part or the whole of convalescent blood. The average mortality-rate was 21 per cent, against 45 per cent for controls.

DISCUSSION OF THE TWO PRECEDING PAPERS

Dr. S. M. White (Minneapolis): The aberrant group of symptoms is very interesting. As we saw the soldiers coming into Base Hospital 26 in the hospital center in Allerey, France, it was not uncommon to have abdominal symptoms. We saw a number of instances of what appeared to be abdominal influenza showing acute respiratory symptoms, chill, and high temperature, together with diarrhea. It was impossible, of course, to prove that these were influenzal in origin, but they were not of the same type that we see due to the dysentery bacillus, and they were not amebic dysentery.

However, an absolute differentiation between this group and the bacillary dysentery group was impossible, for the reason that the dysenterics that we saw were all several days old, and in no case were we able to isolate the specific bacilli of dysenteric infection. Therefore, the differentiation was entirely on the basis of symptomatology, and not on bacteriology.

A possibly more interesting aberrant set of symptoms were those in the abdomen, but due to pulmonary or pleural involvement. Diaphragmatic pleurisies and interlobar pleurisies were quite common, and were often associated with abdominal symptoms. In studying these and attempting to differentiate clinically the abdominal symptom-complex from the chest and abdominal disease as a complication of influenza, we felt that the character of the rigidity in the abdomen was somewhat different in the two, although this was not always so. We sometimes found localized rigidity, but it was extremely common to note that the rigidity due to the chest involvement (pleural involvement) was more widespread than that due to local abdominal inflammation. The muscles of the flank would be commonly involved, the entire rectus muscles, instead of local portions of the rectus, would give rigidity. In all cases, the duty of the physician is to make an extremely careful examination of the chest, because many men came in with a diagnosis hurriedly made. You can realize that, under the necessity of military operations, the medical work connected with diagnosis was hurried, and many men came in with a diagnosis of appendicitis and few with a diagnosis of other abdominal disease, but the actual disorder was found to be in the chest.

Dr. Barron has brought out the occurrence of degeneration of muscles, and particularly of the recti muscles. We saw a number of instances of Zenker's degeneration of the recti muscles during pneumonia. We saw some during the epidemic of influenzal pneumonia. Abscesses occurred in the recti muscles during convalescence, and they formed an interesting picture.

One other point is of particular value and that is the necessity of an extremely careful and persistent search for pleural effusion. The ultimate prognosis as to functional capacity of the chest after recovery from an empyema, was considerably affected by the early detection and relief of empyema. You are familiar with the methods by which fluid can be found.

We learn to rely upon the *x*-ray and upon diagnostic puncture, not upon our physical signs, because the clinical investigation with the atypical symptoms often is misleading. With the slightest suspicion of fluid it is necessary to use either the needle or the *x*-ray, or both, in order to detect fluid. In empyemas during pneumonia, if aspiration is done repeatedly and early, followed by thoracostomy when the patient's condition permits, a much better functional result is secured, less collapse of lung and less adhesion in a collapsed or semicollapsed state occurring.

Dr. L. A. Nippert (Minneapolis): I want to emphasize the article that Dr. George Douglas Head wrote which was printed in a recent issue of the *Journal of the American Medical Association*. I wholly agree with his conclusions. I believe we have all made many mistakes, and have exposed a great many patients to the danger of the so-called "open-air" treatment. What I mean by that is that a patient with influenza is put in bed with the window wide open in the cold November and December air. I believe in fresh air, but I believe these patients should be treated with warm fresh air, just as we treat measles or scarlet fever. Undoubtedly, a great many cases of pneumonia are due to the inconsistent open-air treatment.

You can readily imagine that when a patient is coming down with an acute type of influenza you will find him subnormal, including his temperature, pulse, blood-pressure, and leucocyte count. His resistance is lowered, and, if you expose him to cold and chilling winds, you can expect nothing less than pneumonia to follow. The same is true of these pneumonia cases, which have less chance for recovery when cold air is blowing directly over them.

The treatment of influenza is very simple. Put patients in bed at once, keep them there long enough, and you will have very few fatalities. I asked a doctor of large practice how many cases he had treated; he said, "fourteen hundred." I asked him how many deaths he had had, and he said, "one." Why? Because he put them in bed early, and kept them there a long time. This is the secret of treating influenza.

I cannot say much about the treatment of pneumonia because this pneumonia is of a different type from what we commonly see, and the treatment is, therefore, individual. I wish to call your attention to the statement of a captain in one of the large camps, and I have observed the same conditions that he refers to, that the cases that have profuse nose-bleeding are the ones that are apt to recover; and I really think in a great many cases of intense congestion and purple discoloration of the skin, bleeding would be advantageous. Most of

the pneumonia cases occurred in strong, robust people, unlike the epidemic of twenty years ago that affected mainly the older people.

Drug treatment is of very litle benefit, and morphine and codeine have done more harm than good. The usual treatment with digitalis and supportives is in many instances quite unsatisfactory.

Dr. J. W. Andrews (Mankato, Minn.): It is not easy, Mr. Chairman, for me to confine my remarks to one phase of the very interesting subject under discussion. I have tried to follow closely the writers of the papers and the discussions which accompanied them.

Referring, first, to prophylactic treatment as mentioned in some of the papers and by some of the writers: I must confess that I have but little confidence in it. I refer to the Rosenow serum. At Mankato we adopted this treatment with a good deal of enthusiasm and confidence—confidence because it was made and recommended by Doctor Rosenow, of the Mayo Clinic, at Rochester.

We used the Rosenow serum in about 900 cases; used it very systematically. We do not know whether it did any good or not. We have every reason to believe it did no harm. At first we thought it acted as a preventive, but later patients who had had three injections came down with the influenza, and some of them even had pneumonia. I did not, myself, lose any patient with pneumonia who had had the prophylactic serum, but some of our physicians did. This was not because I treated mine any more skillfully, but it was my good luck. The lesson, however, is that the serum did not even prevent pneumonia in some cases.

In the large cities, like St. Paul and Minneapolis, with your hospital facilities and your opportunities for treating and isolating contagious cases, you do not realize how those of us in the smaller towns and with less hospital advantages and with improvised hospitals in time of epidemics, are handicapped. I am sure that we lost some cases of pneumonia by having our wards too much crowded and I feel certain that some light cases of influenza brought in contact with pneumonia contracted pneumonia, and died. In other words, I believe the pneumonia, per se, is contagious, as well as influenza. So far as treatment is concerned our treatment did not differ from that outlined here today. We put our patients to bed, and kept them there for at least three or four days after the fever had entirely subsided. We tried to give them good nursing and not much medicine.

I feel obliged to the physician who explained to us the meaning of the types of pneumococci, 1, 2, 3, and 4. I have seen much in the journals about these classes, but have not before understood them.

Dr. W. R. Shortridge (Flasher, N. D.): I would not intrude myself on your time except for one or two things. One is that I had a large number of cases during the fall and winter, and the other is that I have very carefully observed the ones that died. In very many cases an edema of the lungs developed early. On auscultation cardiac sounds were audible on the right side of the chest. The temperature was 101° to 103° for four or five days. Then with rest and stimulation it would clear up, and recovery follow. On the fifth or sixth day the temperature would rise to 104° or even as high as 106,° with dyspnea and severe pains in the lower chest on one or both sides, with pleuritic friction-sounds in these areas. I treated these cases with combined pneumonia vaccines; also where the consolidated lung or lungs showed pneumonia, with very positive results in a large number of cases. Then I used it earlier in sthenic cases with high temperature (1 c.c.); then waited twenty-four hours, and, if the fever was lowered, doubled the dose. If there was no marked improvement in twenty-four hours more I did not continue it.

I believe these stock vaccines contain what the manufacturers claim, and, if we are careful to get our diagnosis correct, if we are careful from a clinical standpoint to identify our germ, we shall get results.

Some of the pneumonia cases developed what seemed to be a gangrenous infection of the lungs, gangrenous odor of the breath and at post mortem the lungs were in a gangrenous conditions.

Some patients became cyanotic, with the finger-nails black and the skin almost purple; and this with very few changes in the lungs or pleuræ. The bacteria seemed to be in the blood, and acted on it much like rattlesnake venom, hemolytic streptococci, I presume. These patients all died, and at post mortem the blood was black and viscid, like tar. I wish the pathologists and bacteriologists would develop a prophylactic serum that will enable us to prevent the development of this class of cases. Immune blood-serum given early in all severe cases, may prevent this; but the one who furnishes the blood may not have had this germ in quantities, so the serum will affect these cases either as a prophylactic or to cure it.

Very few of the children died, only three. Two of these were undoubtedly cases of cerebrospinal meningitis, and the other was a case of pertussis with influenza as a complication. In other cases meningeal symptoms would develop a sleepy and lethargic condition. I would clear out the bowels, get the kidneys active, put an ice-cap on their heads, and they got well.

In the general treatment of cases I used digitalin to support the heart, with good results, followed with elixir, I. Q. S., as a tonic. For catarrhal condition and cough, I gave syrup of white pine compound with one minim of tincture of iodine to a dram (adult dose) to promote resolution, and I gave gelsemium as a relaxant. In the very severe cases of coughing heroin and in extreme cases opium freely, gave the best results.

I treated a little over 1,500 cases, and lost a fraction over 1 per cent, counting all cases.

I had some serum from the University of Minnesota, and used it as prophylactic in quite a number of cases. None of these patients developed either influenza or pneumonia.

I would like to know how long that maintains its value—how long after it is sent out it is supposed to be good? and whether they can get us a prophylactic of this "black influenza," as the people call it?

Dr. E. E. Novak (New Prague): I am not presumptive enough to offer suggestions as to treatment; however, I do not consider the discussion of the treatment of influenza complete without a word of warning as to the indiscriminate use of aspirin and similar drugs. Many patients come to us self-medicated, and virtually poisoned by the ignorant use of various drugs, particularly aspirin. As physicians we should discourage

the use of such drugs, and I believe our patients would get along much better.

We had nurses, trained in the large cities, come down to our little community in the backwoods, where we had quite an epidemic, armed with boxes of aspirin tablets, which they administered to influenza and pneumonia patients without orders from the attending physician. This I believe to be a bad practice. I do not see how it is possible even for medical men indiscriminately to prescribe aspirin or similar drugs to influenza patients. Such practice should be condemned.

It is my opinion that aspirin has helped to kill more patients than it has helped to "cure."

Dr. E. L. Tuohy (Duluth): Mr. Chairman,—I would like to make a few remarks relative to Dr. Gardner's suggestion as to the use of convalescent serum. It is apparent to all who went through it that the late influenza epidemic was extremely fatal. Not all who had the disease became very ill, but in most of them it was not difficult to carry out Dr. Nippert's advice, and have them remain in bed. A great many remained there until the undertaker came to get them. Realizing the very high mortality, the fact that the apparently strongest in the community were dying, we felt in a mood to move heaven and earth to do something for them, more than the ordinary symptomatic therapy, since this was soon proven to avail so little. Therefore, when the first reports came out from Chelsea, Massachusetts, speaking of the use of convalescent serum, we immediately began to try it out. In the beginning we followed the cumbersome method of grouping the donors as for the ordinary blood-transfusion. In a few early instances the results were extremely encouraging, where used early, in the face of alarming fulminating symptoms, such as the pouring out of the serosanguineous fluid from the mouth, the results seemed closely to copy the use of antitoxin in diphtheria. *This was early in the epidemic.*

As the cases multiplied it became apparent that time would not permit searching for an individual donor in each instance. It was also intimated at first that the donor should be convalescent from a definite pneumonia. The statement made by McCallum, after he had visited several of our army camps, impressed me as being logical. You will recall that he stated that any individual with influenza, who ran a temperature over 102° and was sick for more than three days, regardless of the clinical chest-findings, had a hematogenous infection in the lungs, either a true pneumonitis or at least a bronchiolitis. The rapidly coalescing areas suddenly showing up a large area of infiltration, that the day before gave no characteristic signs of pneumonia, spoke for the logic of this conception. We, therefore, abandoned the method of drawing blood only from those cases that had been declared pneumonic by their attendants, but took it from anybody who had run a reasonable course of the "flu" and had recovered.

The bloods were pooled, and the serum inactivated. In this way it was easy to keep on hand a fairly good supply all the time. Each individual who accepted the serum and recovered was expected to act as a donor after recovery. This rule seldom failed.

One of my associates collected our statistics, and presented them—some sixty-odd cases in all. He found that the mortality percentage would vary considerably as to your attitude of mind: for example, if you left out a number of cases where the patients were moribund when they got the serum, and others to whom the serum was given after the "pneumonia' had been running six or seven days, the mortality would be about 18 per cent. Including these hopeless cases, the mortality ran, as I recall it, about 35 per cent.

The impression was left with us that were we to pass through this terrible scourge again, we would start out immediately and plan on a large scale the use of convalescent serum, and plan to use it in all cases that by their general appearance promised EARLY in the attack to run a vigorous course. Unfortunately, it was difficult to predict which cases might do badly, from their early symptoms; the rapidly accumulating experience became the safest guide.

Dr. Peppard: A résumé of our experience forces us to quote innumerable symptoms characteristic of or at least occurring in influenza and its complicating pneumonia. The diagnosis of influenza apart from an epidemic must be considered a thing of some difficulty often made by exclusion and from the course. That pathological processes in the chest may give signs referable to the abdomen is frequently noted and it must be kept in mind that the reverse of this is true. This has been sufficient, not infrequently, to direct the attention to a part of the body remote from the actually involved portion, but care in the interpretation of findings is usually enough to set one right in this regard. I have not been able to note any prognostic import in the occurrence of epistaxis, and I have heard the reverse of Dr. Nippert's statement made. Concerning my own experience with the treatment, I have often made the statement that if my family became ill with influenzal pneumonia I would desire to have the convalescent serum used.

EMPYEMAS OF INFLUENZA

By A. A. Law, M. D.
MINNEAPOLIS

When the "flu" hit the American army, that army was in the midst of a warfare of movement. This means, of course, that the soldiers had left their billets, trenches, and dugouts, and were exposed constantly to the weather.

They slept in their wet clothes and blankets on the wet ground, so that, when they contracted the "flu," they were very liable to be extremely sick men as the result of this exposure. Under these circumstances the incidence of pneumonia was extremely high, following influenza, and many of the men reached the base hospitals profoundly toxic. Because these soldiers were so very ill when they reached Base Hospital 26 we had a mortality of 56 per cent in our secondary pneumonias, which was higher than the mortality reported from this country.

Many cases of empyema followed these pneumonias. (I have not the figures to show what the percentage was.)

In Beauvais and Paris we were privileged to see the treatment and results obtained in empyema by the French military surgeons, by such men as Toufier and Duval.

We learned early that the serous or seropurulent effusion into the pleural cavity, took place very rapidly. In many of these cases it occurred before resolution of the pneumonic consolidation had taken place. Obviously, we could not resort to radical surgical interference in these cases, for such interference invited a pneumothorax and collapse of the lung already out of commission from disease. The least we could do, and the only thing we did, before this effusion became purulent, was to aspirate repeatedly

These early collections of fluid were not walled off, but involved the entire pleural cavity. Some of them were fulminating, and could be compared to the early stages of a streptococcal peritonitis.

When the effusion became purulent, it generally had a limiting membrane walling it off as an abscess cavity, which was usually circumscribed. This then was an entirely different surgical problem.

As diagnostic aids we had constant recourse to the aspirating-needle and the *x*-rays, for even in the crowded base hospitals we had ample provision for the use of the rays. The evidence obtained from these two diagnostic agents helped determine what type of surgical interference should be resorted to. In the cases where there was a circumscribed collection of pus we did one type of operation; if there were pockets difficult of drainage, they called for a different procedure. In the first instance simple trocar drainage and the use of the Carrel-Dakin fluid often sufficed; with pus pockets, a rib resection was indicated.

The recent literature is full of different surgical methods devised for the treatment of empyema, yet the surgical indications resolve themselves practically into four fundamental points: (1) drainage; (2) sterilization of the cavity; (3) closure of the opening; and (4) expansion or mobilization of the lung.

How these four considerations are met depends largely upon the individual equation of the surgeon.

Before going to France, in the General Hospital No. 6, at Fort McPherson, Georgia, we were privileged to see a large number of cases of empyema treated by the trocar method of drainage followed by the Carrel-Dakin irrigation.

In these cases the intercostal space was punctured in two places by a large ovarian trocar. Through the openings large, snugly-fitting drainage-tubes were introduced, and were sealed to the skin by gutta-percha tissue and skin-glue; and through them, by close fitting tubes, the Carrel-Dakin irrigation was carried out.

In the older cases of empyema where the pus has displaced the lung, and an inflammatory exudate forms the wall of the cavity, opening of the abscess is followed by little more collapse of the lung. In this type the trocar drainage is especially useful.

Whether the empyema cavity is invaded by trocar, by trephining of the ribs, by resection of ribs, or by intercostal thoracotomy, the fact remains that the outstanding thing which the experience of the war has determined is drainage and the use of the Carrel-Dakin irrigation.

It has been proven innumerable times in our own hospitals and in those of our Allies, that a strict adherence to the Carrel-Dakin technic, can and does rapidly sterilize these cavities, often within fourteen or fifteen days. As in all other wounds treated by this method, the wound secretions are constantly examined in the laboratory, both by smears and cultures. When the cavity

and the wound through which it was drained, are sterile, this drainage tract is treated by débreidement, and closed. Lung gymnastics to help mobilize the collapsed lung must of course be resorted to.

In the old cases of empyema where the visceral pleura has become greatly thickened, and prevents the proper expansion of the lung, it is necessary to open the chest, and either strip off the thickened exudate or do the multiple grid-iron incision of Ransahoff to permit the lung to mobilize.

The experiences of the war have clinched the conviction that treatment of these cases follows the fundamental principles of drainage, sterilization, closure, and mobilization of the lung.

FOR DISCUSSION SEE PAGE 287

SURGICAL COMPLICATIONS IN INFLUENZA

By Arthur T. Mann, M.D., F.A.C.S.,
MINNEAPOLIS

The great bulk of surgery connected with the scourge of influenza has been done on the large numbers of the empyema cases which followed closely in its wake. Brilliant work has been done on them, and there already exists an abundant and varied literature on the subject, which has been sifted and added to by the experience of many men. I have been asked to touch briefly on some of the other surgical aspects of the subject. These concern, chiefly, some things of interest from the standpoint of diagnosis and of pathological etiology.

At the base hospital in which I had the surgical service at the time of the epidemic, there were so many consultations asked for on cases with abdominal symptoms that our interest was at once aroused. Many of them suggested appendicitis. We had two classes of these cases: first, those in which the symptoms developed so early that they were admitted as appendicitis; and, secondly, those which developed the symptoms after admission to the medical wards as cases of influenza.

There were cases of appendicitis in both of these classes. There were other cases in which the diagnosis was in doubt, and the discussions were warm and interesting as to whether they were or were not cases of appendicitis. The history of the case, the local findings, the temperature, the pulse, the leucocytosis, and the *x*-ray findings were all studied before a final diagnosis could be made.

In the first class, cases were admitted within the first twenty-four hours as appendicitis, which later proved to be the "flu." On a close study of these cases the physical findings would be almost convincing. There would be abdominal pain, tenderness localized at McBurney's point, muscular rigidity, increased pulse and temperature, often nausea, and sometimes vomiting. But there would be something in the picture of the case to attract one's attention. The symptoms of the disease and the onset of the pain would usually not coincide. The general symptoms would precede the pain.

In some cases, while there would be pain of a dull, aching character in the right iliac region, the rigidity would be slight, or the rigidity might be rather higher up in the abdomen, and in some of them the rigidity would be absent altogether, although the pain and localized tenderness persisted. The leucocyte count, as a rule, would be low. On repeated examinations, as time went on, the picture would change. Pneumonia, usually of the lobular type, would become demonstrable at or near the base of the right lung, often first by the *x*-ray and then by the clinical signs. The local abdominal signs gradually became less prominent, and the picture of the case would merge into the picture of a "flu" with pneumonia at the base near the diaphragm.

In the second class of cases, those admitted as influenza with the abdominal symptoms developing during the course of the disease, there were also some puzzling cases. It was rare for a true appendicitis to develop; but it did occur, and it made us study with great care any case developing abdominal symptoms.

These cases of abdominal pain were rather large in number. They were of three general types: (1) acute appendicitis; (2) cases closely simulating acute appendicitis; and (3) cases evidently due to other causes. Acute appendicitis was so rare that we had only one case before my orders took me east to join an evacuation hospital. The cases closely simulating appendicitis

gave us a great deal of trouble and anxiety. In a patient already seriously ill with influenza, it was no light matter to see abdominal symptoms developing which might demand operation.

In some of them, the abdominal conditions so closely simulated appendicitis that they would, in ordinary times, often have been classed as appendicitis. But we were going through unusual experiences, and it made us cautious. On the one hand we saw a case of influenza develop abdominal pain, tenderness and rigidity in the right lower quadrant with the picture of increasing toxemia, slowly merge into the picture of an influenza with a right-sided pneumonia involving the base of the lung and the diaphragm, and with the abdominal symptoms gradually abating. On the other hand, we saw a patient already ill with a complicating pneumonia gradually developing fairly typical abdominal symptoms of appendicitis, only to find that the pneumonia had extended to the right base and had involved the diaphragm in a pleurisy. In all these cases the temperature did not help us much, as we had the temperature of an influenza complicated by the temperature of a pneumonia. The increased temperature only confused the picture.

The leucocyte count was helpful in many cases, as it was apt to be lower than one would expect in an appendicitis of the apparent severity present. However, the leucocytosis occasionally ran rather high. In these cases we often found that the pneumonia was complicated by an empyema, which would account for the high leucocyte count.

Many of the cases came to autopsy, and the findings were of great interest. In one case would be the findings of influenza and of pneumonia, and in the abdomen the loops of the ileum just above ileocecal valve would be inflamed and red from intestinal infection with the influenza, surrounded by a straw-colored fluid sometimes becoming turbid, and retroperitoneal glands somewhat enlarged. This abdominal condition might help to explain the localized pain and tenderness and, in part, the rigidity. In an occasional patient desperately ill with pneumonia and with an empyema well started, late abdominal distress with distention, rigidity, and an abdominal dullness changing with position, disclosed a generalized purulent peritonitis, with streptococcic infection secondary to the "flu," but without an organic lesion in the abdomen, which could be found as a source of the infection. In one case there was pus running up from the cecum along the ascending colon and rounding the liver to the diaphragm, with an empyema in the thorax above, but with a normal appendix. It was not easy to explain the abdominal infection, as there was no apparent direct connection between the empyema and the purulent peritonitis. In other cases the diaphragm would be roughened with pleurisy, explaining reflex abdominal symptoms through the lower intercostal nerves which supply the abdominal wall over the appendix and furnish part of the nerve supply to the diaphragm. When the eighth, ninth, and tenth intercostals are involved the abdominal pain and rigidity will be high in the abdomen, for it is the upper part of the abdomen which they supply. When the eleventh and twelfth intercostals are involved the pain and rigidity are more often over the appendix region to which their abdominal branches run. Reginald Smith, of England, in two of his cases with pain and rigidity high in the abdomen, blocked the eighth and ninth intercostal nerves, and the symptoms disappeared.

In the cases which are evidently not appendicitis, the abdominal rigidity is often lacking, or it is too high in the abdomen. Sometimes the pain could be traced to a reflex pain from the diaphragm sometimes to an evident neuritis of the lower intercostals.

In the rare cases of true appendicitis complicating the "flu" where signs persist and increase in severity, operation is demanded. The anesthesia of choice is local. Oxygen-gas anesthesia can be added to this, when deemed necessary, without apparent additional risk to the patient.

Suggestions of gall-bladder infections have been present in cases with pain and rigidity rather high in the right side of the abdomen. In the cases I saw they proved to be from other lesions complicating the influenza, usually lesions at the base of the lung involving the diaphragm and implicating the eighth and ninth intercostal nerves and sometimes the tenth. In other words, they were due to the same general conditions which gave the cases of pseudo-appendicitis. I saw no cases with marked jaundice, but while I was there no case came to operation nor did I see an infected gall-bladder at autopsy.

We must conclude that infections of the gall-bladder and of the appendix due directly to the influenza epidemic, are rather rare, though a true appendicitis did occasionally occur; and that a general septic peritonitis may occur without a definite abdominal lesion like an appendicitis or an acute perforation of an ulcer of the stomach or duodenum, to account for it.

There was a surgical complication in the neck in a few cases which simulated the deep infection of a Ludwig's angina. The first case I saw in consultation had a brawny, red, edematous swelling, extending from the side of the jaw well down into the lower half of the neck, of almost board-like hardness, marked by great pain and tenderness. The high temperature and the general depression of a marked sepsis were present, as well as a high leucocyte count.

Incision deep into the tissues of the upper portion of the neck by the surgeon of the head section failed to strike pus. It was not until four days later that they went for it again, and at that time an abscess inside of the capsule of the parotid gland was found. The Pfeiffer bacillus of influenza and the streptococcus hemolyticus were both recovered from the pus. Other cases occurred, and in each one it was necessary to pierce the capsule of the parotid gland before the abscess was reached. There is great danger of injuring the facial nerve which radiates through the gland; and Hilton's method of puncturing the capsule should be employed after the deep dissection of the neck is done. If done early an extensive dissection is not necessary. An incision which goes to the capsule, and a blunt puncture through the capsule with a spreading of the opening, are all the operative measure necessary in these cases. These cases must be operated on early before much mischief is done, for they rapidly become desperate. Owing to the dense fascia of the neck, pus cannot readily find its way to the surface, and is likely to burrow deeply among the muscles toward the mediastinum, toward the base of the skull or toward the cavity of the mouth. The constitutional symptoms from septic absorption are usually severe.

It would seem that the streptococcus, which is the usual type of infection, may possibly have gained entrance to the gland from the mouth after the influenza bacillus has prepared the way.

Muscle abscesses have occurred as a rather late complication of the "flu," but not in large numbers; and I have seen an abscess from an infected rib. The muscle abscess is apt to start deep in the belly of a muscle. A segment of one rectus, or rarely of both abdominal recti, may be involved. There will be an induration which can be made out, rather indefinite at first, becoming larger, with more and more well-defined margins as time goes on; and, if neglected, definite fluctuation will develop, and a considerable abscess may be evacuated. Smaller abscesses may develop about the lower region of the chest where the muscles run over the ribs.

One abscess deep in the abdomen, recently reported, simulated a deep appendical abscess. This proved to be an abscess in the belly of the psoas muscle, from which, finally, half a pint of pus was evacuated. The organism found was the streptococcus hemolyticus.

The infecting organism is not always the same. Sometimes it is the streptococcus; sometimes it is the pneumococcus, as might be expected. In some of the camps and in civil life the pneumonias complicating the influenza showed a larger percentage of pneumococcic infections than did ours.

A peculiar degeneration, known as Zenker's degeneration, probably precedes the infection in most of these abscess formations. This is a grayish degeneration of the muscle, the cause of which is not yet clear. They are apt to occur in a patient of low tone, at points in the muscles of the lower chest wall, where they lie over the ribs and at the centers of the bellies of the recti muscles in the areas farthest removed from the blood supply, and it is possible in other places. Lactic acid has been found in these areas of degeneration, but whether it is the cause or whether it is the result of the muscle degeneration, is not known.

FOR DISCUSSION SEE PAGE 287

HEAD COMPLICATIONS OF INFLUENZA

By J. D. Lewis, M.D.
MINNEAPOLIS

I feel that what I have to say regarding the head-complications of influenza, will add but little to what those of you who have treated and studied this disease, have already observed.

Epistaxis was a common symptom. It was usually mild, occasionally quite sharp, and in one case, alarming. In the severe case, the bleeding was from both nares, and I had considerable difficulty in controlling it. As a rule the bleeding was monolateral, and the source in almost every instance was from this point (indicating) where the floor of the nasal cavity joints the vestibule, known as Kisselbach's area; in others, the hemorrhage was from the turbinal bodies. In some of these patients, a thin, whitish membrane covered the nasal mucosa which bled quite readily when disturbed. Shortly after the initial symptoms of influenza appeared, the entire nasal mucosa was engorged and greatly thickened and bled when touched with a probe. In a few days following what may be termed the congestive stage, just referred to, a crusty condition of the nasal chambers was noted in many of these patients. When the crusts were removed a raw and bleeding surface was disclosed.

Many of these patients complained of symptoms simulating sinus involvement, but since our suspicions were not confirmed by röntgenograms and transillumination, we inferred that the symptoms were induced by a mechanical interference with drainage from the sinuses, due to engorgement of the nasal mucosa. In this particular locality, true empyema of the nasal accessory sinuses was exceptionally seen.

In a majority of the patients examined, the pharyngeal mucosa and the tonsils were red and swollen—the patients frequently complaining of hoarseness and dryness—especially at night. In a few instances, peritonsillar abscess developed.

At the Minneapolis City Hospital, from October, 1918, to April, 1919, more than 1,500 patients suffering from influenza were treated, and of these, 53 developed otitis media; 11, frontal sinusitis; 5, maxillary sinusitis; 1, sphenoidal sinusitis; 1, ethmoidal sinusitis; and 2, edema of the larynx.

Dr. E. T. Bell at the University Hospital, in a series of ten necropsies, in which the head was examined, found only one with sinus involvement.

The statistics of Stone and Swift (A. M. A. February 15th, 1919), who performed 53 necropsies at Fort Riley, Kansas, between September 5th and November 1st, 1918, are interesting from a comparative viewpoint, showing, as they do, the frequency of sinus involvement in one locality and its infrequency in others.

Their head findings were as follows:

Edema of the brain, 9; meningitis, subacute, serous or purulent, 4; meningitis and edema, 20; sphenoiditis, 28; ethmoiditis, 13; frontal sinusitis, 2; otitis media and mastoiditis, 17.

In this series, the sinus infections complicating influenza, the predominating organism was the hemolytic streptococcus; other organisms occurred in combination in 25 per cent; in the ear, the hemolytic streptococcus, either singly or in combination, was found in 35.3 per cent.

A summary of the necropsy cultures of the sinuses, positive for streptococcus hemolyticus, was as follows:

Sphenoiditis, 46.4 per cent; ethmoiditis, 25 per cent; ears and mastoids, 35.3 per cent.

In 300 nasopharyngeal cultures from influenza patients, the bacillus influenzæ was the predominating organism in 35.7 per cent.

With reference to the 12 cases operated on for mastoiditis during the epidemic, we were uncertain from the history previous to the ear involvement, as to the antecedent nasopharyngeal condition, i. e., whether it was influenzal or not. In every instance the bacteriological report stated that the pneumococcus was the prevailing type of infection; this, therefore, is at variance with the findings of bacteriologists in other parts of the United States.

DISCUSSION OF THE THREE PRECEDING PAPERS

Dr. W. M. Chowning (Minneapolis): I had the good fortune, a while ago, to see some of the cases that Dr. Law speaks about at Army General Hospital No. 6. In August I was assigned to Atlanta to look after 200 cases of empyema under the direction of the Empyema Commission.

Dr. Law makes the statement there were four cardinal principles in the surgical treatment of empyema. Of course, empyema is really the principal surgical phase of influenza. He made the statement that you can cleanse under Dakin, which you can. If you have a small opening and plenty of time to use the Dakin you can cleanse it—there is no doubt about it. You can follow the Dakin treatment until you can't see an organism on your smear. However, in a large opening which involves practically the full length of the

pleural cavity up to the apex you can treat it under Dakin until your smears are entirely negative, and yet hidden beneath this pleura, which has now become thickened by the use of that Dakin solution, beneath that there may be a hidden abscess that does not show up. It may be quiescent; it does not show up on your smears.

(Demonstrating on blackboard) Here is your opening into the pleural cavity; you cleanse this cavity up to the apex perhaps. Now, the Rockefeller Institute made the statement, and, I think, some of them still make the statement that Dr. Law makes, that you can treat this, sterilize it, and then close it. However, the Rockefeller Institute has never demonstrated that this is good surgery. If they give the wound time enough in the cases where the apex is involved, they will blow open again after closing it up and you can get a primary union of your superficial wound. The pleura has become thickened cicatricial tissue.

I don't know whether other forms of antiseptics will give this great amount of thickening. I have seen some as thick as two fingers. Dr. Wayne Babcock, of Philadelphia, started the process at Atlanta of stripping this thickened pleura all out. Personally, if I had the thickened pleura and had the choice of the thickened pleura or having it cut out, I would take the thickened pleura. If you have to strip that thickened pleura you are bound to get blow-boles into the lung; no matter what the condition was before, whether you have miliary abscesses in the lungs or mere thickening of the lung covering, so much lung tissue is wounded in the operation that in time plenty of leaks will develop.

The only method I would recommend after having seen some very good men do this, including Dr. Jos. Mitchell of the Empyena Commission and Dr. Wayne Babcock, and the only thing I would want done to me, is to resect a rib or two, and if we had a wide involvement I would want the resection to extend if necessary from the sternum to the vertebra and as far under the scapula as possible to insure wide and proper drainage. Keeping the wound open and allowing the cavity to fill is in my opinion the only sure method of closing this type of empyema cavities. (Applause.)

Dr. R. E. Farr (Minneapolis): I would take issue with Doctor Chowning in regard to his assertion that this is the only manner in which large thoracic cavities can be closed. Dr. Emil Beck, of Chicago, has shown us a method whereby these cavities can be closed, and at my clinic tomorrow I shall show some cases of this kind. I shall demonstrate very large cavities as shown by the bismuth *x*-rays—cavities the like of which, formerly, I had never seen closed except by a Schede or Estlander's operation, to which Doctor Chowning has referred. In these cases we have been able, with a resection of a small portion of three ribs and turning in skin-flaps, to get them to heal without difficulty.

These deep cavities in the chest will heal just as is the case with cavities in the bone.

Dr. Mann (closing): I think I have very little more to say except that in this epidemic the empyemas have been different from the empyemas we have usually been accustomed to. We have some big cavities, and cavities in various places rather than always in the lower part of the pleural cavities, and those cavities must be found and treated, wherever they are. In the early days of the infection, of course, we had serum, and to open a lung just at that time when the patient was so seriously ill with pneumonia and get a pneumothorax, is liable to result fatally. Instead of doing that, we used to aspirate the cavities, during this early period. We tried three different methods. We aspirated the cavities, and then injected a small amount of Dakin's solution in one class of cases, withdrew that and injected a little more, withdrew it, and finally left a little in the cavity. Then we would control the next aspiration by the filling of the cavity as shown by an *x*-ray and by the chest findings, and the cavity would again be aspirated and the Dakin's used when the cavity showed a sufficient size, which wasn't very great.

In the second class of cases we used the Dichloramine-T. In the third class of cases we used a 2 per cent formalin in glycerine, the old Murphy solution. Our Dakin's seemed to do so much better that we abandoned everything else except the Dakin's. We never aimed to do an operation until there was frank pus present nor until the pneumonia condition had so improved that the patient could safely stand an operation. I do feel in certain cases aspiration does a great deal of good because it lets the lung come down, which is always good, and helps to restore the lung to its normal size and to its function. In some of the cases we used negative pressure, negative pressure produced by a constant electric apparatus or a constant suction pump such as the dentists use, or it can be done with a little glass syringe and the air pumped out and pus pumped out three to six times a day. A nurse can be trained to clamp the tube, put on the syringe and give a little negative pressure and clamp it again three times during the night and the interne can do a dressing three times during the day and he can use the Dakin's solution, putting in a little, 30 c.c. to 40 c.c., and pulling it out until the solution returns clear. This removes pus and is a strong factor in sterilizing the cavity. Besides this it is a strong factor in the convalescence because it keeps the lung expanded and helps to retain the function of the lung. (Applause.)

Part II of this symposium, and the symposium on Heart Affections will appear in our next issue.—The Editor.

THE
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THE JOURNAL-LANCET AND THE SOUTH DAKOTA STATE MEDICAL ASSOCIATION

Some months ago both the editor and the publisher of THE JOURNAL-LANCET decided that no effort whatever would be made by them to obtain a renewal of the journal's contract with the South Dakota State Medical Association in the matter of its official relation to the Association. This position was taken because we believed that the Association is composed of men who need no advice upon matters with which they are intimately acquainted, although we were well aware of the determined effort being made by *outsiders* to induce the Association to part company with THE JOURNAL-LANCET. In fact we were informed—and so informed in a most offensive manner by such outsiders—that our relations with the Association would be severed. The cock-sure method of stating in advance what course a body of honorable men will follow when such stated course is in violation of common sense, and even discredits the honor of the men themselves, is, to say the least, an unfortunate one for the men who have to explain, either to themselves or their interested friends, why their prophecy failed.

"The House of Delegates of the South Dakota State Medical Association voted unanimously to continue its relations with THE JOURNAL-LANCET." Such is, in brief, the message that reaches us as we are closing the forms of this issue of the paper.

The message needs no comments other than our hearty thanks to the South Dakota Medical Association, which are hereby extended both to the members of the House of Delegates and to the individual members of the Association.

The full report of the transactions of the Association will appear in an early issue of THE JOURNAL-LANCET.

SIR ARTHUR NEWSHOLME, K.C.B., M.D., ON CHILD-WELFARE IN LONDON

Sir Arthur Newsholme, Chief Medical Officer of the Government Boards for Great Britain, spent a day in Minneapolis last week, and talked before the Civic and Commerce Association, the Hennepin County Medical Society, and the Welfare Association Committee.

In speaking of the conditions in London over which he has direct control, he talked particularly of the condition of the child, the necessity of careful examinations in school, and the public supervision of the treatment of the child at home, unless there is a family physician to take care of it. He claimed that this method means an extension of the general care of the child, and that the responsibility is not located entirely with the schools or the doctors, but with the public; for, if the public does not have a share in this work, it will be the undoing of the whole foundation of child-welfare.

If this is not done for the benefit of the child, there is a decided loss; but, when it is done under expert supervision, it results in a decided gain to the child and to the public,—a gain from all points of view. This special care takes in three very important problems: It sees that the child is undergoing proper methods of education; it supervises and corrects child labor; and, lastly, it attends to the sanitation of the child.

Of course, most children, particularly in the poor districts, suffer, first, from filth, which includes impure water, and this can be remedied by inspection, which provides for the isolation of the child where communicable diseases are spreading, and it corrects bad habits, not only of the child, but of the family,—habits which are due to ignorance and general misunderstanding.

In 1900 there was a general decrease of childbirth and also an increase in the death-rate. The latter, even in spite of war conditions, has been declining very rapidly, due to the attention to the home life and to the mother. Then, too, this decrease is, in part, due to the fact that before the war there were, in a certain district, about six hundred twenty nurses, and since the war began the number has been increased to three thousand

fifty. Notably, too, and quite in line with the increase in nurses and social workers, the medical and surgical clinics in London increased from two hundred fifty before the war to twelve hundred fifty. He also showed that the death-rate in Great Britain was about one hundred in a thousand, or 10 per cent. in children,—babies mainly.

Another factor in the improved conditions in Great Britain has been the money problem, as the mothers received more money while their husbands were at war than when they were at home (the allowance for a woman with four children was twenty-two shillings a week, and was later increased to thirty-five shillings a week). This, of course, brought many comforts and lessened many evils. Then, the second point, which naturally follows, was the closing of the "publics," or the saloons. This closing prevented many of the men, and, incidentally, a great many women, from patronizing these public houses.

The expenditure which Great Britain made brought a very decided improvement to the many, due, mainly, to the trained attention which was given the family, especially those who were suffering from illness before the war. Their condition was very much improved, due, in a large measure, to the fact that they were not only looked after by the Government, but were cared for, supervised, and observed by trained workers.

It is said that one-third of the total deaths of children occurred in the first month, and three out of every hundred babies were born dead; while out of one thousand mothers only four died. One of the causes for this improved condition and lessened death-rate among the mothers was that when sick they went to the hospital and were kept there for ten days; and it was found that though they could be illy spared from their families for this length of time, it was best to spare them. This move was a reasonable one, and has shown the benefits of hospital care and attention. This also contributes to the mother and child a firmly established physiological relation, and thus insures health to both mother and child, and safeguards them in the future.

Great Britain has been very active in its medical examinations, and in many cases has contributed three-fourths of the cost of the care of the mother and child. A part of this work has been done through volunteer officers, thus eliminating a good deal of the political control which hovers around such efforts on the part of the Government or of the health authorities.

We also gather from other reports that, at the birth-rate existing before the war, it will take Great Britain ten years to reach her pre-war population, Germany twelve years, and France sixty-six years. It was said, in an aside, that some Americans compared the three countries—that America wondered how much she could make, that England decided what she could spend, and that France wondered how much she could save. And, evidently, from the results, Great Britain's expenditures for the benefit of child-welfare and public health have been fundamentally sound.

Summing up the situation, the first care is for the mother, the second care is for the baby, the third is for the child, and the fourth for the general audit of health.

Much work of a like character has been done in this country, and in Minnesota, but, perhaps, not to such an appreciable degree or with such scientific accuracy as in England.

The speaker paid a high tribute to Dr. H. M. Bracken, whom he knew, and said he had profited by many of Dr. Bracken's suggestions.

Sir Arthur suggested that it is good politics, as well as good policy, to get the support of the politicians. It is the custom to sneer at politicians, but it is much wiser to cultivate them or to replace them.

"SURGEON" H. M. BRACKEN, EX-SECRETARY OF THE MINNESOTA STATE BOARD OF HEALTH

We had in type for our last issue an editorial on the State Board of Health controversy, but it was rendered "untimely" by Dr. Bracken's resignation, following his appointment to a Government position, increasing the honors that have fallen to this most maligned and much honored man. In the course of that editorial we used the following language:

> It is interesting, informing, possibly humorous, to note that the sole offense charged to Dr. Bracken is inability to obtain from Minnesota legislatures—past and, of course, future ones—funds sufficient to carry on the health work of his Board (of course, the State's Board). Indisputable facts—facts acknowledged by his enemies—show that, in spite of this signal infirmity, he somehow obtains, year after year, the appointment of men to the Board of Health who unanimously uphold his work; and he also keeps the Board in the foremost rank of all state boards of health. Then, too, in spite of his "objectionable personality," he finds a place for himself in practically all national bodies, general organizations, and special state and government commissions on health matters.

The crowning appointment in Dr. Bracken's

career came at a time when he was, so to speak, under a cloud—he certainly was under fire, and the gunners were, in the main, men engaged in public-health work, largely of a volunteer character.

Why the State of Minnesota, practically acting through the medical profession, should have kept this man for nearly a quarter of a century, and why the Government of the United States, also acting through the medical profession, should want this man, practically for the remainder of his active life, are questions to be seriously considered by men who put their personal preferences above the interests of public health.

A conscientious, incorruptible, able man leaves us, but only to go into a larger work. A group of self-dishonored politicians "on their way to oblivion," stopped a day in the Minnesota Senate chamber and attempted—by resolution, let it be noted—to dishonor this much honored man.

A NEW MEDICAL JOURNAL—"MODERN MEDICINE"

The man who starts a new medical journal in these days of transition—whatever that may mean—and of high prices, will, of necessity, gain the pity or the admiration of the craft of medical editors and publishers. The pity will be for a man who has eyes and sees not; the admiration, for a man who has eyes and sees. The need of one or even of one hundred *new* medical journals is plain enough, even to the men who are conducting the *old* journals; and it is equally plain to the men who are reading, or subscribing for, the *old* ones.

The wealth of meaning in the above paragraph will be found only by the man who puts the right meaning into the word "new."

Modern Medicine clearly defines its mission, which, in a large sense, is missionary. It announces that its purpose is to deal with "everything that will make people fit for service." The quoted words may seem to be a conundrum, but they have a well-defined meaning in the minds of the promoters of this *new* journal. Specifically, it will deal with industrial hygiene, public health, and current problems in social medicine.

Modern Medicine is delectable in its mechanical makeup. Its editorial staff is composed of three well-known men,—Dr. Alexander Lambert, Dr. S. S. Goldwater, and Dr. (LL. D.) John A. Lapp, the latter being also managing editor. Its director is Dr. Otho F. Ball, and its office of publication is Chicago. The subscription price is $3.00 a year.

Modern Medicine desires to succeed, and we wish it great success.

A MEDICAL MEETING WORTH ATTENDING—MIDSUMMER MEETING OF THE SOUTHERN MINNESOTA MEDICAL ASSOCIATION

We publish in full, on another page, the complete program of the midsummer meeting of the Southern Minnesota Medical Association to be held at Rochester on June 23d and 24th. The scientific program could hardly be excelled; it will be a treat to hear the distinguished men from outside of the state who will be present; the entertainments for the members and their wives are attractive; and the Mayo Clinic of course always has on hand work of great variety and interest.

MISCELLANY

MEMORIAL TO PROFESSOR JOHN HENRY SCHROEDER BY THE FACULTY OF THE COLLEGE OF MEDICINE OF THE UNIVERSITY OF MINNESOTA

The Faculty of the College of Medicine at the University of Minnesota have passed the following memorial on the recent death of Dr. John H. Schroeder, Assistant Professor of Medicine:

"The Faculty of the Medical School records with sincere regret the death of Dr. John R. Schroeder. As student and teacher he had proved his faithfulness to the school and to the profession of medicine. His record alike in scholarship and in clinical service has done honor to him and to his Alma Mater.

"The Faculty tenders to Dr. Schroeder's bereaved family the sympathy of its members and the assurance that, despite his early and untimely death, he has left to his fellows the inspiration of work well done and a tale of good deeds, the memory of which, in the lives of many, will 'smell sweet and blossom in the dust.'"

NEWS ITEMS

Dr. G. K. Hagaman will soon move from Anoka to St. Paul.

St. Alexius Hospital, of Bismarck, N. D., graduated eleven nurses last month.

Waseca has voted to issue bonds for $15,000 to be used to build a city hospital.

St. Michael's Hospital of Grand Forks graduated a class of three nurses last week.

The Sand Beach Sanatorium at Lake Park is to have a nurses' home, to cost $20,000.

Dr. Theodor Bratrud, of Warren, has returned from California, where he spent the winter.

Immanuel Hospital of Mankato graduated nineteen nurses last week in the class of 1919.

Dr. W. M. Chowning has resumed his practice in Minneapolis, having returned from army service.

The Nurses' Training School of the Rochester State Hospital will graduate twelve nurses on June 12th.

Dr. A. S. Adams, who has practiced in Rochester for thirty-four years, is planning to move to Cleveland, Ohio.

Dr. C. F. Smith, of St. Paul, is the acting Secretary and Executive Officer of the State Board of Health.

Dr. W. W. Moir, of Minneapolis, who has been in army medical work in Siberia, returned home last week from Vladivostok.

Dr. H. H. Slocumb, who practiced in Belgrade before entering the Medical Corps, will soon begin practice in Brown's Valley.

Aberdeen, S. D., seems to be greatly in need of a new public hospital; and plans are under way for raising $150,000 for the purpose.

Dr. A. G. Beyer is temporarily doing the work of physician of the Training School at Red Wing since the resignation of Dr. A. W. Jones.

Dr. W. S. Chapman has moved from Redfield, S. D., to Watertown, S. D., and has become a member of the staff of the Bartron Hospital.

Waseca has selected a site for its new hospital. The city and county have appropriated $30,000, and more will be raised by private subscription.

The Lutheran Deaconess Hospital Association has purchased the Bible School property in Wahpeton, N. D., and will use it for hospital purposes.

The second annual conference of the Minnesota Hospital Association is to be held at the Radisson Hotel, Minneapolis, on June 4th and 5th.

Asbury Hospital of Minneapolis graduated thirty-four nurses last week with interesting services, ending with a banquet at the Athletic Club.

The Galesville (Wis.) Commercial Club has started a movement for a hospital for that city, now dependent upon the hospitals of La Crosse and Winona.

The St. Paul health laws are to be thoroughly studied by a committee of the City Council and codified. An intelligent study of the health laws of many cities is imperative.

Dr. C. E. Reeves, of Eagle Bend, is doing post-graduate work in Chicago. During his absence Dr. John Watson, of Minneapolis, has charge of Dr. Reeves' practice.

The North Dakota tuberculosis sanitarium at Dunseith, in that state, will be greatly enlarged. An appropriation by the State of $100,000 is now available for that purpose.

Dr. Martin D. Westley, of Cooperstown, N. D., who has returned from France and resumed practice, served in the Chateau Thierry, St. Mihiel, and Verdun sectors with a field hospital.

The Methodist State Hospital at Mitchell, S. D., contemplates the enlargement of its building by a $60,000 wing or extension. Architect J. C. Chapman, of Sioux Falls, has drawn the plans.

Drs. James Grassick and H. W. F. Law, of Grand Forks, N. D., gave a full report of their visit to Minneapolis Clinic Week before the Grand Forks District Medical Society held on May 16th.

A hospital association has been incorporated at Richmond for the purpose of conducting a hospital and erecting a suitable building. The capital stock is $25,000. Dr. J. J. Gelz is at the head of the project.

The movement in Hutchinson for a community hospital has gone far enough to insure sufficient funds for the work as planned. A commodious residence building will be purchased, and refitted for hospital use.

The Swedish Hospital of Minneapolis has just completed a new diet-kitchen, which is located on the roof of the main hospital building. Miss Marion Peterson, of Ann Arbor, Mich., is the new dietitian of the hospital.

At a recent meeting of the Clinical Section of the Hennepin County Medical Society, it was decided to extend the hours of the clinics of the 1920 Clinic Week and to limit the afternoon symposiums to two days, instead of four.

The service medal of the United States, awarded to men and women who have done notable work during the war, was conferred last week upon Dr. Wm. J. Mayo, of Rochester, and,

posthumously, Miss Jane A. Delano, the American Red Cross nurse, who died last month in France.

Dr. Walter J. Marcley, of Minneapolis, has returned from Switzerland, where he was at the head of the tuberculosis work of the Red Cross. In France Dr. Marcley worked with both the Red Cross and the Rockefeller Foundation.

Dr. J. Warren Bell, the son of Dr. J. W. Bell, of Minneapolis, has returned from France, and begun active practice. Our readers will recall Dr. Bell's recent letter, published in these columns, on obstetrical methods in a Paris hospital.

Dr. Mark Mizener, of Bowman, N. D., who has recently returned from France, will take an extended postgraduate course in the East, and then locate in New England, N. D., and will be associated with Dr. G. A. Sarchet, of that city.

The bureau of the Minnesota State Board of Health in control of venereal diseases has moved its offices from the State Capitol to the Biological Building on the Campus of the State University. The bureau is still in charge of Dr. H. G. Irvine.

Dr. John Abbott, of St. Paul, who was taken prisoner by the Germans and was reported killed, has sailed for home. Dr. Wallace Cole, also of St. Paul, who has been in France on medical work for three years and is now a major, will soon be home.

Dr. W. V. Lindsay, of Winona, has been appointed health officer of that city to succeed Dr. D. B. Pritchard, who held the position for many years, attracting wide attention by his aggressive work. Dr. Lindsay is still a major in the Medical Corps.

Dr. W. W. Covell, of Platte, Neb., who recently purchased the practice of Dr. Merton Field, of St. Peter, has begun his work in that city, and will maintain the Field Hospital, which, it was feared, would close when Dr. Field left. Dr. Field is taking a rest on a farm near Bismarck, N. D.

Notices of Minneapolis Clinic Week will be found in a very large number of Northwestern papers, and they are uniformly highly commendatory of the clinical work done and of the afternoon symposiums. Such notices, presumably, are inspired by physicians who attended the clinics.

Captain Theodore Sweetser, of Minneapolis, who recently returned from France and letters from whom have appeared in our columns, has spoken on his war experiences before a number of Minneapolis organizations, and he tells an interesting story. Captain Sweetser is stationed at Fort Snelling.

The Minnesota Sanitarium for Indigent, Crippled and Deformed Children, at St. Paul, is again under the supervision of Miss Elizabeth McGregor, who, with the industrial teacher of the institution, Miss Elizabeth Clark, has returned from France, where the two were doing work among the French children.

Dr. Harvey W. Wiley, president of the U. S. Pharmacopeial Convention, desires to call attention to the fact that incorporated state medical associations are entitled to send delegates to the convention in 1920. Delegates should be elected this year. The convention meets in Washington, D. C., on the second Tuesday of May, 1920.

The Minnesota State Homeopathic Institute held its annual meeting last week in St. Paul. The following were elected officers for the current year: President, Dr. H. O. Skinner, St. Paul; vice-president, Dr. Ethel Hurd, Minneapolis; secretary, Dr. G. M. Smith, Lake Crystal; treasurer, Dr. George Haywood, Minneapolis.

Surgeon General M. W. Ireland, of the U. S. Army, in a recent letter to the Board of Regents of the University of Minnesota, approved the plan to keep intact the organization of the University Base Hospital No. 26. He also commended in high terms the excellent work done by Lt. Col. A. A. Law, the director of this Hospital Unit.

The Ladies' Auxiliary of the South Dakota State Medical Association, at its annual meeting last month in Watertown, elected the following officers: President, Mrs. J. B. Vaughn, Castlewood; first vice-president, Mrs. G. L. Hill, Sioux Falls; secretary-treasurer, Mrs. B. A. Bobb, Mitchell; corresponding secretary (a new office), Mrs. C. S. Toole, Watertown.

The Range Medical Society held its annual meeting at Biwabik on May 14th. The meeting was given over to a discussion of a tuberculosis sanatorium. The County will be asked to make the necessary appropriation. Officers were elected as follows: President, Dr. C. B. Lenont, Virginia; vice-president, Dr. C. W. Bray, Biwabik; secretary, Dr. W. H. Empie, Virginia.

Miss Lydia H. Keller, secretary of the Minnesota State Board of Examiners of Nurses, has accepted an appointment by the Board of Foreign Missions of the Methodist Church, and will sail for Nanking, China, on the 15th inst. She has resigned her position on the Board of Examiners

of Nurses. She is splendidly qualified by character and professional attainments for her new work.

Dr. W. A. Evans, of Chicago, the distinguished writer on health matters for the public press, through syndicate articles, will deliver an address at the annual meeting of the North Dakota State Medical Association to be held at Grand Forks on June 24th and 25th. Drs. F. C. Rodda and H. E. Michelson, of Minneapolis, the former a specialist in children's diseases and the latter a specialist in skin diseases, will present papers at this meeting.

The South Dakota State Medical Association held its annual meeting in Watertown last week, a full report of which will soon appear in our columns. The following were elected officers for the current year: President, Dr. R. D. Alway (for many years secretary of the Association), Aberdeen; first vice-president, Dr. H. T. Kenney, (now in France); second vice-president, Dr. G. S. Adams, Yankton; secretary-treasurer, Dr. F. A. Spafford, Flandreau.

The program of the midsummer meeting of the Southern Minnesota Medical Association to be held at Rochester on June 23 and 24, is an exceedingly attractive one. Dr. Willy Meyer, of New York; Dr. Arthur Dean Bevan and Mr. John G. Bowman, of Chicago; and Dr. Antoine DePage, of La Panne, Belgium, are the distinguished outside speakers. They will speak at or after the banquet on Monday night. The noonday luncheon and the evening banquet of Monday and the noonday luncheon of Tuesday will be given by the courtesy of Drs. W. J. and C. H. Mayo. The program is published below in full.

PHYSICIANS LICENSED TO PRACTICE MEDICINE AT THE APRIL (1919) EXAMINATION

BY EXAMINATION

Brown, Edwin S.....U. of Pa., 1917
Cochran, Joseph P.....P. & S., N. Y., 1918
Daniels, John H.....P. & S., N. Y., 1918
Eisler, Edwin R.....U. of Ill., 1919
Gruenhagen, Arnold P .....U. of Ill., 1919
Gunby, Paul C.....Harvard, 1918
Haines, Samuel F.....Harvard, 1919
Henderson, Arthur J.....U. of Ill., 1919
Mattick, Walter L.....Cornell, 1911
Milan, Maurice G. A.....Georgetown, U., 1913
Perlstein, Isidor.....Harvard, 1912
Quackenbush, Walter K.....
Albany Med. Coll., 1895
Silver, Horatio Z.....Miami Med. Coll., 1900
Sturre, Julius R.....U. of Minnesota, 1918
Terk, Abraham P.....Albany Med. Coll., 1911

THROUGH RECIPROCITY

Bowers, Harry E.....U. of Illinois, 1914
Bussen, Leonard E.....U. of Minnesota, 1902
Clifton, Theodore A.....
Long Island Coll. Hosp., 1910
Fisher, Lawrence F.....Rush, 1914
Gowdy, Ralph A.....
Chicago Coll. Med. & Surg., 1917
Larson, Andrew G..Am. Med. Miss. Coll., 1904
McKechnie, Wilfred.....Queens, 1902
McNutt, John R.....U. of Michigan, 1916
Pepinsky, Rae B.....Miami, 1908
Schoonmaker, Guy D.....Vanderbilt U., 1917
Van de Erve, Hubert.....Rush, 1905

PROGRAM OF THE MIDSUMMER SESSION OF THE SOUTHERN MINNESOTA MEDICAL ASSOCIATION

AT ARMORY HALL, ROCHESTER, MINNESOTA,

JUNE 23 AND 24, 1919

OFFICERS

John Williams, President, Lake Crystal, Minn.
W. E. Sistrunk, 1st Vice President, Rochester, Minn.
W. J. Richardson, 2nd Vice President, Fairmont, Minn.
H. T. McGuigan, Secretary, Red Wing, Minn.
G. F. Merritt, Treasurer, St. Peter, Minn.

ANNOUNCEMENTS

Headquarters at Zumbro Hotel. Midsummer Banquet at Armory Hall, Monday, June 23, 8 P. M., courtesy of Dr. W. J. Mayo and Dr. C. H. Mayo. Ladies are invited.

Dr. W. J. Mayo will entertain the members of the Association and ladies at luncheon Monday, June 23, at his residence, 12:30 to 2 P. M. Autos will leave for the residence at 12 to 12:15 P. M.

Dr. C. H. Mayo will entertain the members and ladies at luncheon at Mayowood Tuesday, June 24, at 12:30 to 2 P. M. Autos will leave for Mayowood at 12 to 12:15 P. M.

Dr. Willy Meyer, of New York; Dr. Arthur Dean Bevan, of Chicago; Mr. John G. Bowman, of Chicago; and Dr. Antoine DePage, of La Panne, Belgium, will speak at the evening session, Monday, June 23, Armory Hall, 8 P. M.

Physicians are requested to bring their ladies.

A complete list of operations will be published and available at Zumbro Hotel at 8 A. M. each morning.

Monday, June 23d, 8 A. M. to 1 P. M.

SURGICAL CLINICS

St. Mary's Hospital—
Room 1—Dr. C. H. Mayo—8 to 10:30 A. M.
Dr. C. A. Hedblom—10:30 to 1 P. M.

Room 2—Dr. W. J. Mayo—8 to 10:30 A. M.
Dr. V. C. Hunt—10:30 to 1 P. M.

Room 3—Dr. E. S. Judd—8 to 1 P. M.

Room 4—Dr. D. C. Balfour—8 to 10 A. M.
Dr. J. C. Masson—10 to 1 P. M.

Room 5—Dr. W. E. Sistrunk—8 to 1 P. M.

Room 6—Dr. J. deJ. Pemberton—8 to 1 P. M.

SURGICAL PATHOLOGIC CLINIC

Dr. W. C. MacCarty
Dr. A. C. Broders Dr. O. C. Melson
Dr. A. E. Mahle

Colonial Hospital—8 A. M. to 12 M.
Orthopedic Surgery—Drs. M. S. Henderson and H. W. Meyerding.

Worrel Hospital—8 A. M. to 12 M.
Surgery of the Nose, Throat, and Ear—Drs. H. I. Lillie and R. A. Barlow.
Laryngology, Oral and Plastic Surgery—Drs. G. B. New and C. M. Clark.
Ophthalmic Surgery—Drs. W. L. Benedict and A. D. Prangen.

Mayo Clinic—11 A. M. to 12 M.
X-ray Demonstration on Stomach Diagnosis—Drs. R. D. Carman and A. B. Moore.

Monday, June 23d, 1919, Armory Hall, 2 P. M.

SCIENTIFIC PROGRAM

1. Army Psychologic Tests—Dr. Arthur Sweeney, St. Paul.
2. Therapeutics in Cardiac Disease—Dr. S. Marx White, Minneapolis.
3. Some Phases of the Goiter Question—Dr. H. S. Plummer, Rochester.
4. Benign Xanthic Extraperiosteal Tumor of the Extremities Containing Foreign Body Giant Cells—Dr. A. C. Broders, Rochester.
5. The Clinical Course and Pathology of an Obscure Ostitis Causing Loose Bodies in Joints—Dr. A. R. Colvin, St. Paul.
   Discussion by Dr. M. S. Henderson, Rochester.
6. The Uterus at the Menopause—Dr. Ernest Z. Wanous, Minneapolis.
   Discussion by Dr. Leda Stacy, Rochester.
7. The Treatment of Urethral Caruncle—Dr. John Grenshaw, Rochester.
   General discussion.
8. Results in a Series of Mastoids; Operations for Acute and Subacute Mastoids—Drs. Lillie and Barlow, Rochester.
   General discussion.
9. The Early Diagnosis and Treatment of Acute Inflammations of the Eye—Dr. E. W. Benham, Mankato.
   General discussion.

Monday, June 23d, 1919

Dr. W. J. Mayo will entertain at luncheon the members of the Association and ladies at his residence at 12:30 to 2 P. M.

Autos will leave Saint Mary's Hospital, Colonial Hospital, and Worrell Hospital, 12 M. to 12:15 P. M. for the residence.

Monday, June 23d, 1919, 8 P. M.
Evening Session at Armory Hall

BANQUET

Courtesy of Drs. W. J. and C. H. Mayo

Hospital Standardization—John G. Bowman, Chicago, Director American College of Surgeons.

The Medical and Surgical Treatment of Gastric and Duodenal Ulcers—Dr. A. D. Bevan, Chicago.

Discussion by Dr. W. J. Mayo, Rochester.

Air-tight Thoracic Drainage—Dr. Willy Meyer, New York City.

Discussion by—
Dr. C. H. Mayo, Rochester.
Dr. C. A. Hedblom, Rochester.

Subject to be announced—Dr. Antoine de Page, La Panne, Belgium.

Tuesday, June 24th, 8 A. M to 1 P. M.

SURGICAL CLINICS

St. Mary's Hospital—
Room 1—Dr. C. H. Mayo, 8 to 10:30 A. M.
Dr. C. A. Hedblom, 10:30 A. M. to 1 P. M.

Room 2—Dr. W. J. Mayo, 8 to 10:30 A. M.
Dr. V. C. Hunt, 10:30 A. M. to 1 P. M.

Room 3—Dr. E. S. Judd, 8 A. M. to 1 P. M.

Room 4—Dr. D. C. Balfour, 8 A. M. to 10 A. M.
Dr. J. C. Masson, 10 A. M. to 1 P. M.

Room 5—Dr. W. E. Sistrunk, 8 A. M. to 1 P. M.

Room 6—Dr. A. W. Adson, 8 A. M. to 1 P. M.

SURGICAL PATHOLOGIC CLINICS

Dr. Wm. C. MacCarty
Dr. A. C. Broders Dr. O. C. Melson
Dr. A. E. Mahle

Colonial Hospital—
Orthopedic Surgery—Drs. M. S. Henderson and H. W. Meyerding, 8 A. M to 12 M.
General Surgery—Drs. C. A. Hedblom, V. C. Hunt and J. deJ. Pemberton, 8 to 10 A. M.

Worrel Hospital—8 A. M. to 12 M.
Surgery of the Nose, Throat and Ear—Drs. H. I. Lillie and R. A. Barlow.
Laryngology, Oral and Plastic Surgery—Drs. G. B. New and C. M. Clark.
Ophthalmic Surgery—Drs. W. L. Benedict and A. D. Prangen.
Mayo Clinic, second floor—
Demonstration of Diagnosis by Pyelography—Dr. F. W. Braasch, 8 to 9 A. M.

Mayo Clinic—
X-ray Demonstration on Chest Diagnosis—Drs. R. D. Carman and A. B. Moore, 11 A. M. to 12 M.

Tuesday, June 24th, 1919, 12:30 to 2 P. M.

Dr. C. H. Mayo will entertain at luncheon the members of the Association and ladies at Mayowood, 12:30 to 2 P. M.

Autos will leave St. Mary's Hospital, Colonial Hospital, and Worrel Hospital for Mayowood at 12 M. to 12:15 P. M.

Tuesday, June 24th, 1919, 2 P. M.

APTERNOON SESSION AT ARMORY HALL

1. Causes of Failure after Operation for Club-feet—Dr. J. P. Lord, Omaha, Nebraska.
   Discussion by Dr. H. W. Meyerding, Rochester.
2. The Treatment of Carcinoma of the Uterus—Dr. J. W. Little, Minneapolis.
   Discussion by Dr. E. S. Judd, Rochester.
3. Abdominal Adhesions—Etiology and Treatment—Dr. E. S. Muir, Winona.
4. Studies in Influenza—Dr. E. C. Rosenow, Rochester.
5. Teeth and Their Relation to Focal Infection—Dr. Boyd Gardner, Rochester.
   Discussion by Dr. V. I. Miller, Mankato.
6. Intracapsular Cataract Operations—Dr. W. L. Benedict, Rochester.
   Discussion by Dr. William R. Murray, Minneapolis, and Dr. F. E. Burch, St. Paul.
7. Rôle of Laboratories in the Practice of Medicine—Dr. Wm. C. MacCarty, Rochester.
   Discussion by Dr. S. Marx White, Minneapolis.

LOCUM TENENS WANTED

A Minneapolis physician wants a man to care for his practice for two weeks, beginning June 6. Salary basis. Address, 240, care of this office.

HOUSE CALLS FOR BLOOD EXAMINATIONS

An Internist who has had good training and experi- services to make house calls in the city for blood examinations and other pathological work. Call "Pathologist," M. 1573 or Dial 32 503.

LOCATION WANTED

A young physician who will soon return from France, desires a good location. Will do locum tenens work temporarily. Information leading to such work will be appreciated. Address 244, care of this office.

LOCUM TENENS WANTED

For at least two months beginning about June 20, for general practice in county-seat town in South Dakota. Must be capable and able to handle anything in general work. Give references. Address 239, care this office.

LOCUM TENENS WANTED FOR TWO MONTHS

A physician in general practice in North Dakota desires a man to take charge of his practice for two months, beginning June 6th. Town of 500. Will pay $200 a month and expenses. Address 248, care of this office.

PRACTICE FOR SALE

Combined surgical and general practice in good southern Minnesota town of 3,000, excellent hospital, $12,000 business. Combination house and office to sell, thoroughly modern. Good reason for selling out. Address 237, care of this office.

PHYSICIAN WANTED

The village of Rushmore, Minn., wants a physician to locate there. The country is rich, and a good man will be given loyal support. This is an excellent opening. For particulars, address Mr. W. C. Thom, care of the First National Bank, Rushmore, Minn.

DESIRES A MONTH'S WORK WITH A SURGEON

A man doing general work in a small town, for a little postgraduate work this summer, desires to donate his time for about a month to a good general surgeon, or to a good eye, ear, nose, and throat man. Am able to do refraction. Address 249, care of this office.

WANTED—AN INTERNIST AND A RÖNTGENOLOGIST FOR GROUP PRACTICE.

A Internist who has had good training and experience to head the department of medicine for group practice; and also a Röntgenologist who is similarly qualified for the *X*-ray department of such group. In a city of 15,000. Address, 243, care of this office.

LABORATORY TECHNICIAN AND *X*-RAY OPERAOR WANTED

A firm of surgeons in one of the large cities of South Dakota wants a technician who can do all kinds of laboratory work, including Wassermanns, etc., and *x*-ray work. State what experience you have had, and also salary desired. Address 235, care of this office.

ASSISTANT WANTED FOR EYE, EAR, NOSE AND THROAT WORK

Assistant in a large eye, ear, nose, and throat practice. Must be young, a good worker, and have experience in eye and ear work. Partnership later to right man. Give complete information concerning qualifications, languages spoken, etc., in first letter. Address 246, care of this office.

WANTED—SALARIED POSITION WITH PARTNERSHIP IN VIEW

By a married man, 36 years of age; graduate of the University of Michigan (1907); ten years' general experience; one and a half years in Army Service. Prefer town with hospital facilities. Licensed in Minnesota and North Dakota. Will do locum tenens work for three or four months. Address 241, care of this office.

PHYSICIANS' PRESCRIPTION BOTTLES FOR SALE

French square 8-ounce bottles, packed in 1½-gross cases, at $4.50 per gross or $6.75 per case. In 5-case lots, $4.25 per gross, in 10-case lots, $4.00 per gross. We also have a few gross each of 2-, 3-, 4-, 8-, and 16-ounce round and square prescriptions. Prices quoted on any size or quantity wanted. Address Wm. Painter Company, 1417 Washington Ave. S., Minneapolis.

PRACTICE FOR SALE

South Dakota practice, in southeastern part of state, practice running $8,000 to $10,000 a year. To purchaser of modern office equipment and office-residence located on three lots and including barn and garage. Beautiful improved country, fine people, collections excellent. Sacrifice price $7,000 with payment of $2,000 down and good time. Equipment includes *x*-ray and good supply of drugs. Don't write unless you have the money and want a good location. Reason for leaving, condition of health. Address 238, care of this office.

PUBLISHER'S DEPARTMENT

STANOLIND

The Stanolind Surgical Wax and Petrolatum are two products of unexcelled quality. The excellencies of these two derivatives from petroleum are such as were obtainable only by a large expenditure of money made under chemical experts of the highest grade. The great Standard Oil Company did a real service to medicine when these products were given to our physicians and surgeons.

Every quality of each product that perfection in its kind demands will be found in both Stanolind Surgical Wax and Stanolind Petrolatum.

THE QUAKER OATS COMPANY

The excellence of Quaker Oats, indeed the superiority of this product, has been demonstrated to the satisfaction of all medical men, as well as of all laymen; and one no longer thinks of oat-meal for breakfast without thinking of Quaker Oats.

This Company also manufactures puffed rice and puffed corn in a form that makes delicious and nutritive foods for people of all ages and in all conditions of health.

The Company is entitled to great praise from the public for their contributions to the table of both the well and the sick, especially the invalid.

PEPTENZYME

The name of "Reed & Carnrick" is a positive guarantee that their claims for Peptenzyme are not exaggerated, and when they say this product of their laboratories is something more than digestant, their word is dependable. It digests the food that the stomach will not take care of, but it does more; it restores the functional activity of the stomach and thus tones up the system, instead of weakening it, as some digestants do.

Petenzyme aids digestion, and restores the digestive tract to its normal state of activity.

For literature and a trial bottle address, Messrs. Reed & Carnrick, Jersey City, N. J.

START YOUR HAY FEVER DRIVE EARLY

Possibly one reason why hay fever gets such a strong hold on some individuals is that the patient or physician does not realize the great need for "getting on the job" early, and immunizing the patient before the flying pollen has established its infectious process.

"Hay Fever Season" will this year probably begin early and last late, and the physician who starts his campaign early and keeps unremittingly after it will reap the greatest rewards.

The hay fever of summer and early fall yields in many cases to prophylactic and curative treatment with pollen (ragweed) supplied by The Abbott Laboratories, Chicago, Illinois. The prophylactic treatment is supplied in boxes of five ampules, while the "continued" treatment comes in 5 mil. bulk containers.

Literature on the use of Pollen Protein (ragweed) will gladly be sent upon inquiry to The Abbott Laboratories.

THE SWEDISH HOSPITAL, MINNEAPOLIS

The Swedish Hospital is one of the group of large hospitals in Minneapolis, and is specifically characterized by excellent management in all its departments. Its new diet-kitchen on the roof of the main building is a model of its kind, and is under the most competent supervision.

The laboratories of the Hospital meet all the demands of surgical and medical diagnosis, and the Nurses' Training School is doing exceedingly good work.

Of course the rates of a hospital like the Swedish, are very low, for it is not run for profit, and there is no graft in its management It is a safe place to send patients. Its superintendent, Mr. G. W. Olson, takes pleasure in corresponding with physicians or in receiving them as visitors at the hospital.

THE WESTERN CHEMICAL COMPANY

The really beautiful display of tablets and liquids made by the above company during Clinic Week in Minneapolis attracted the attention of many visitors, and gave the representative of the company an opportunity to explain that the outward beauty of their tablets is much excelled by their inward excellence.

The Western Chemical Co. is endeavoring to give the medical profession the purest drugs obtainable, put up in a form that robs medicine of its terrors to children and delicate people.

The Company's literature and samples are well worth sending for. They deal in neither patented nor proprietary remedies, but in the drugs used in every physician's daily practice.

Address the Western Chemical Company, Hutchinson, Minn.

A VERITABLE PROP

After the subsidence of the acute symptoms of any serious febrile disease, an examination of the blood will almost always reveal a degree of anemia in direct proportion to the severity and duration of the primary disease. It is thus always desirable in such cases to adopt measures to revive, restore and reconstruct, and with this object in view one should begin at the foundation, i. e., the blood itself. To construct new red cells, and reconstruct those which have become dehemoglobinized by disease, nothing is more potent in effect than Pepto-Mangan (Gude). This standard preparation of organic iron and manganese supplies the vital fluid with the elements needed to recontruct and restore its oxygen carrying capacity, by contributing the necessary hemoglobin. Pepto-Mangan is palatable, absorbable, and promptly assimilable. It encourages the appetite, without disturbing digestion or causing constipation.

HOW THE ARMOUR COMPANY TREATS ITS EMPLOYES

Plans are being made by Armour and Company for the renewal of the medical examinations of 12,900 men and women working in the Chicago plant of the company. This means of safeguarding the health and safety of the Armour workers is not new, but was discontinued during the war because of the urgency of orders placed to keep the fighting forces supplied with food and the enormous amount of extra labor needed.

Dr. Volney S. Cheney, chief surgeon, and his corps of assistants will have charge of the huge task. Every

worker in the plant will be examined free of charge. The value of visiting a doctor at least once a year for a medical examination to discover any defects in health which may be easily corrected by treatment, is recognized generally by persons of means who visit their doctors regularly so that they may know in just what state of health they are. Armour and Company, thru their welfare bureau and their staff of doctors, offer this service free to their many workers; and, in case defects which have interfered with a man's work are brought to light, the man or woman will be transferred to some other task in the plant which, in the opinion of the medical men, he is better able to perform.

FELLOWS' SYRUP OF HYPOPHOSPHITES

There are probably few physicians in active practice who are not more or less familiar with, at least, the name of Fellows' Syrup of Hypophosphites. This valuable product has been prescribed by the medical profession for years. Its actual clinical value has been demonstrated too often and in too many hands to admit of any doubt or question.

It is worthy of note, however, that much stress is being laid upon the value of those mineral constituents of food to which the name has been given of "Chemical Foods," such as calcium, potassium, iron, and manganese, which are all actually needed by the body quite as much as proteins or carbohydrates are. When deprived of a sufficiency of such "Chemical Foods," metabolism suffers. Therefore, to supply such "Chemical Foods" is a logical therapeutic measure, and to supply them in the form of Fellows' Syrup of Hypophosphites is not only logical but valuable because, in addition, the dynamic and cell activating properties of quinine and strychnine are also secured.

"Chemical Foods" and their uses have been briefly described in an interesting booklet issued by the Fellows Medical Manufacturing Co., Inc., New York; and copy of this booklet, together with samples of Fellows' Syrup, will be sent to any physician on request.

THE WEIGHT OF EVIDENCE

If professional endorsement of the therapeutic efficacy of a remedy by men of recognized reputation, further supported by a successful existence of over a quarter of a century, counts for anything, it must then be logical to presume that such a product is worthy of a trial in conditions where it is clinically indicated.

No greater an authority upon gynecological diseases than Sims could be quoted, and the fact that he prescribed and recommended the use of Hayden's Viburnum Compound in certain gynecological and obstetrical conditions, is weighty evidence of the therapeutic efficiency and reputation which it enjoyed with the older members in the profession.

That it has continued to serve as a satisfactory remedy since the time of Sims, in the treatment of dysmenorrhea, menorrhagia, metrorrhagia, threatened abortion, rigid os, etc., its increasing popularity with the profession indicates, and should warrant it worthy of a trial in these diseases, when they are presented to you.

To those physicians not familiar with the genuine H. V. C., as originated by Dr. Wm. R. Hayden, a sample with formula and literature will be forwarded upon request to the New York Pharmaceutical Co., Bedford Springs, Bedford, Mass.

SALVARSAN and NEOSALVARSAN

(ARSPHENAMINE-METZ) (NEOARSPHENAMINE-METZ)

We have greatly improved the methods of manufacture of these standard remedial agents. Official tests show they possess a relative fixity of arsenic content entirely in keeping with the original products.

We have no hesitation in asserting that Salvarsan and Neosalvarsan are now **the** arsenical preparations *par excellence.*

We have reduced the prices to such an extent that these valuable drugs are now available for much more extended use in private practice.

SALVARSAN
(ARSPHENAMINE-METZ)

	per ampule
0.1 gram	$ .60
0.2 "	.75
0.3 "	.85
0.4 "	1.00
0.5 "	1.25
0.6 "	1.50
1.0 "	2.00
2.0 "	3.75
3.0 "	5.50

In Cartons containing 10, 25 or 50 Ampules
(May be assorted sizes)
10 per cent. Discount

NEOSALVARSAN
(NEOARSPHENAMINE-METZ)

	per ampule
Dosage I, 0.15 gram	$ .75
" II, 0.3 "	1.00
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SYMPOSIUM ON INFLUENZA AND ITS PNEUMONIAS*

IN TWO PARTS—PART II

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THE NERVOUS COMPLICATIONS OF INFLUENZA

BY C. E. NIXON, M.D.
MINNEAPOLIS

For several centuries the association of nervous symptoms with epidemics resembling our influenzal epidemics has been recognized. The nervous manifestations of influenza are multiform. It has been the predisposing or direct etiological factor in various functional and organic disturbances of the central and peripheral nervous system.

In considering the following post-influenzal syndromes it is to be emphasized that these develop in many cases where the nasal and respiratory manifestations have been extremely mild or indefinite. The respiratory symptoms, many times, are not an index of the severity of the disease. As Jelliffe notes, this is not infrequently seen in the history of influenza in families. He mentions an instance of this in the epidemic of 1889 and 1890. One patient in this family died of an influenzal pneumonia; another, with a slight bronchitis only, died with a severe zoster; and a third, with no influenzal symptoms in general, had an external and internal ophthalmoplegia. In his article on epidemic encephalitis, Bassoe calls attention to the fact that it is not common for the patient with this disease to have had a clinically distinct influenza. It would seem that the infectious agent, or its toxin, has various types with predilection or selective action for certain tissues, or else that in various individuals there is a locus minoris resistentiæ in certain tissues, so that we find the bronchial symptoms predominating in one case, the respiratory in another, the nervous in a third, etc.

Neurasthenia has been a common sequel of influenza, following, not infrequently, cases that are otherwise uncomplicated, but seen after any of the various forms. The neurasthenic syndrome is most varied. A myasthenic syndrome state is frequently seen: the slightest exertion greatly fatigues the patient; with this there may be rather marked mental depression, so that a vicious circle is established; the patient noting his ready fatigue is more depressed, and his depression accentuates the fatigue. In other patients, with or without the above manifestations, various visceral neuroses are observed. Jelliffe calls attention to the marked disturbances in the vegetative nervous system in the course of the influenzal attack. The visceral functions are greatly disturbed by this lack of balance in the

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nervous mechanism regulating metabolism; a prolongation of this disturbance in the vegetative nervous system partly forms the basis for the neurasthenic syndrome, and the depression of the neurasthenic state further aggravates the imbalance between the sympathetic and autonomic nervous systems.

Especially in the simple fatigue states the condition tends to clear up in a few weeks; in others, the syndrome is very persistent; the patients with marked myasthenia tend to the condition of astasia-abasia.

The treatment of these cases consists of giving the patient a diet of rather high nutritive value; at first, perhaps, giving frequent feedings. After a period of rest systematic graduated exercises are instituted. These need to be carefully supervised, in order that the patient is not over-fatigued and thereby discouraged, but at the same time it should be insisted that the patient take the alloted amount of exercise. Hydrotherapy is of value partly, probably, through its action in assisting elimination. Hot packs on the abdomen after meals assist in relieving the gastro-intestinal disturbances; tepid sponges at night are often sufficient to overcome the insomnia. Needless to say, proper environment, both physical and mental, is of great importance. Tonics and alteratives are given as indicated; constipation is common, and this is best regulated by diet and mineral oil. Small doses of sodium bromide are often useful for a short time. Veronal may be used for a few nights to secure rest and to break the habit of insomnia, but it is essential that the patient be not allowed to rely on these drugs.

Psychoses during or following the acute stage are not uncommon. In all psychoses, except deliria, there is usually an interval of several days to a week or more between the termination of the attack and the onset of the mental symptoms.

Menniger, in an excellent clinical and statistical study of 100 cases, classifies the mental disturbances in four groups:

1. The infection-toxin delirium. The delirium usually occurs in the febrile period, but may precede or follow the fever.

2. Well-defined cases of dementia precox. Numerically, this was the largest of his group. Of 100 cases of psychoses related to an influenzal attack, thirty-five fell in this group. Usually the influenza is only the predisposing cause of the dementia precox developing in cases where the basis existed prior to the attack; in some cases it may be a direct etiological factor.

3. This group includes cases of the usual types of psychosis which were precipitated in acute form by the influenza.

4. This group consists of cases of dubious diagnosis, and indicates the frequent difficulty in distinguishing between post-febrile delirium and dementia precox.

Of the definitely organic nervous complications of influenza, encephalitis is perhaps the most interesting. The so-called lethargic encephalitis has been defined as "a toxic, infectious, epidemic syndrome, characterized clinically by the trial lethargy, ocular palsies, and a febrile state; and anatomically by a more or less diffuse encephalitis, most marked in the gray matter of the mid-brain."

There is, usually, an acute onset with symptoms of an intense toxemia; the headache accompanying the disease has aptly been termed "cruel." The stupor is usually intense, but may be mild.

Besides the palsies in epidemic encephalitis, isolated or combined involvement of the cranial nerves is a not infrequent complication or sequela of the influenzal attack. Among the more common are ocular palsies, facial neuralgia, paralysis of the facial nerve, tinnitus, and glossopharyngeal palsies. The vagus nerve is markedly concerned in the production of the respiratory symptoms. Optic neuritis has been reported.

In reference to the other peripheral nerves, neuralgias are frequent. Neuritides of all sorts of distribution are reported. Even polyneuritis has been reported.

Meningitis has been a not infrequent complication. The spinal meninges, as well as the cerebral meninges, have been involved.

The symptomatology of the influenzal meningitis is much the same as in the other forms of meningitis. There are probably wide variations in its severity, and it is not unlikely that some of the cases of severe headache may be due to a serous meningitis. The disease, however, is usually extremely severe. Osler reports a case of influenzal pneumonia with hemorrhagic spinal meningitis. Lumbar puncture is often of great assistance in the diagnosis. In contradistinction to the other purulent forms of meningitis, the leucocyte count in the blood is comparatively low.

As with the other nervous complications, the

myelitides present great variation in their severity and symptomatology.

The most common type of myelitis caused by influenza is a dorso-lumbar myelitis. The general influenzal symptoms may have been very mild; in some cases a history of a definite influenzal attack is not obtainable. The onset is often insidious, the symptoms gradually progressing. There is usually pain in the dorso-lumbar region; with meningeal involvement the pain may be of a radicular character. Paralysis gradually set in, either of a spastic or flaccid type, or at first the paralysis may be spastic and later, as the involvement of the cord becomes more extensive, the paralysis changes into the flaccid type. As the flaccid paralysis denotes extensive cord involvement, the prognosis is much graver than in the spastic forms that do not progress so extensively. The prognosis of the influenzal myelitides in general is fairly good. A severe type is occasionally seen where there is the picture of an ascending myelitis; the involvement beginning in the lower cord gradually progresses cephalad with progressive flaccid paralysis and anesthesia. Trophic disturbances are marked in this type.

Besides the functional and organic nervous disturbances more or less directly due to the influenzal toxin, all sorts of neurological entities have developed with influenza as the apparent predisposing cause.

DISCUSSION

Dr. W. A. Jones (Minneapolis): The nervous and mental results of influenza are not entirely due to influenza. They are in part due to the lowered resistance from the strain and stress under which most people have labored for the last four years of the war. This condition can be readily accounted for by an analysis of the mental disorders which follow influenza. As an illustration of this, three patients have declared to me that they were responsible for the war, showing that these unstable types have been laboring under great excitement and anxiety, and have kept the war problems, the economic problems, and the general excitement of the times in their minds all the time. Then, when influenza appeared, with its complicating pneumonias, the disorganization was completed, and sometimes the destruction of the individual.

The most important complication which has been associated with the influenzal infection is fatigue, which is not only local, but very general and is probably of the toxic type. These people, who become mentally fatigued, do not recover in a short time, particularly if they are of the unstable class. They seemingly recover in from one to four weeks, but slight exertion is followed by a renewal of the symptoms of fatigue, particularly of the heart muscles; and the majority of such patients do not recover in six or eight months; sometimes a longer period is necessary, and this in spite of the graduated exercises and in spite of our various methods of treatment. It seems likely that many of these cases have re-infections from time to time, and the infection evidently expends its force in the nervous system.

The nervous patients that come under observation exhibit varying grades of palsies to complete paralysis of all extremities, including the paralytic and the myelitic types.

The mental cases vary from a slight confusion or a mild delirium to the wild and furious excitements or to a definite and protracted form of depression. I have no doubt that most of the men here who practice out of the city, and those here, have seen numerous forms of mental disorder which can be more or less definitely classified. These patients either gradually recover or die within a very short time, and in the gradual improvements the necessity of prolonged rest is most imperative. They should not be urged to get up, to move about, or to exert themselves unnecessarily.

A few patients of the lethargic type have been noted. One was a typical form; the man was unable to talk, to swallow, or to move. He had a bilateral nystagmus, which was extremely active during the early stage of his lethargy. He received four lumbar punctures, not for diagnostic purposes, but for therapeutic results. The fluid was under great pressure with the first two, and in the last puncture very little fluid was obtained, and then only drop by drop. He made a good recovery after his lumbar punctures. In another case there was a history of sudden and severe pain in the head, the type which frequently accompanies a brain tumor; but lumbar puncture was made shortly after the arrival of the patient at the hospital, and all of the head symptoms, including a congested eye-ground, disappeared. Later the patient had a typical intestinal influenza, lost greatly in weight, and had frequent re-infections, but is now convalescent. One other case, in which there was a probable metastatic brain tumor, probably from an old breast removal, presented a complete ophthalmoplegia with a ptosis of the right eyelid. This, together with an influenzal state, made it difficult to determine the exact conditions. Then, too, the patient lost rapidly in weight, and developed mild delirium and confusion at times, but under mercury the ophthalmoplegic symptoms have nearly disappeared,—that is, the muscle balance of the eye-ball has been nearly restored, and the ptosis has cleared up. The patient is still very sick, and probably has a brain tumor.

Various patients with cranial nerve symptoms have appeared with a history of development after influenza, and some of these people recover very promptly.

A word of caution: Do not push these influenzal cases too fast, because of the mental and nervous fatigue, and do not be discouraaged if the patient does not recover for a long time.

SYMPOSIUM ON HEART AFFECTIONS*

H. E. Hines, M.D.; J. W. Bell, M.D.; F. C. Rodda, M.D.;
J. Warren Little, M.D.; and H. E. Robertson, M.D.

AURICULAR FIBRILLATION; AURICULAR FLUTTER; CLINICAL RECOGNITION AND TREATMENT

By H. E. Hines, M. D.
MINNEAPOLIS

Dr. Hines' paper is not available, and so cannot be published. As the discussion deals with the subject, per se, quite independent of Dr. Hines' treatment of it, we deem it worth while to publish the discussion.—The Editor.

DISCUSSION

Dr. J. W. Andrews (Mankato): I do not like to be the first to discuss this paper in which I was so much interested, neither do I like to see the time wasted. I understand we are to confine ourselves to that particular subject and that I will try to do. Dr. Hines spoke of the irregular action of the heart in auricular fibrillation. I did not understand whether he specified that the heart missed its beats or whether there is an arhythmic condition of the heart. I think I have had several of those cases in which there was auricular fibrillation where there was no missing of the beat whatever, but an irregular action of the heart, beating along (indicating.. ....), somewhat like that, and that to me has been a pretty good evidence of auricular fibrillation.

I have wondered just what the pathology of that condition is. I have been led to believe, however, by the little study I have been able to give it, that it frequently does not exist in the muscle of the heart itself, per se; not entirely, at least, but rather in the nerve supply in some affection in the medulla oblongata or the nerve center in the medulla oblongata, or the portion of the pneumogastric nerve leading to the heart. But, whatever the true pathological condition may be, I feel certain that in auricular fibrillation we get that arhythmical action, rather than a missing of beats. I think the treatment with digitalis rather confirms that opinion.

Personally, I have not been very successful in treating heart disease, as I call it, where there is irregular action,—that is, where there is missing of the beats, but in this aryhthmical condition the trouble is frequently due to auricular fibrillation, and digitalis seems to be almost a specific.

Dr. S. Marx White (Minneapolis): The subject of the recognition of auricular fibrillation and flutter is one so large that it is practically impossible for Dr. Hines to cover it satisfactorily in the time allowed. Unfortunately, I did not hear the paper, but I should be interested in emphasizing a few points which he may have covered—and I beg your indulgence if he has—in the treatment of the two conditions.

I am sure that it is clear to you that auricular fibrillation is the one condition which gave digitalis its great reputation; that it was for a long time unknown that it was auricular fibrillation that was the condition which digitalis had benefited. The conception that digitalis performs its principal effects on the heart by means of blocking or lessening the capacity of the bundle of His to conduct the impulses from the auricle to the ventricle will help us to realize what the effect of digitalis is. This is getting to be the most interesting phase of digitalis therapy. The reason for the tremendous frequency and irregularity of the ventricular rate in auricular fibrillation is that the auricle is beating so irregularly and arhythmically, not contracting with an even rhythm, but simply fluttering or fibrillating, as the term indicates, and these impulses are showered down upon the ventricle. The ventricle is often not ready to receive them; it may not respond to the stimulus of the impulses; and, on the other hand it frequently happens that the ventricle responds so rapidly that it has no opportunity for rest.

In the majority of cases of untreated auricular fibrillation we find not only great irregularity in time and in force, but we have an exceedingly high rate, incompatible with effective work on the part of the heart.

Now, it is possible with digitalis to diminish the conductive capacity of the bundle of His, consequently some of the impulses coming down from the auricle to the ventricle are cut off. We can slow the heart-rate simply by decreasing conductivity of the bundle of His.

It is interesting to note, too, that the condition which we call "cardiac insufficiency" in auricular fibrillation is often not cardiac insufficiency, but is really cardiac irregularity. The proof of that is that when we have slowed down that heart with digitalis there is a tremendous improvement in many instances, and possibly in the majority of instances, in the cardiac capacity in a very few days, or even hours, a tremendous improvement in the clinical appearance and the sensations of the patient. Digitalis given in large amounts to a patient who has not had digitalis before and whose auricles are fibrillating, will often result in an improvement within twenty-four hours.

On Friday I am going to attempt to cover somewhat this work at my nine o'clock period, and I shall try to make clear the outlines of the principle. These hearts recover almost by magic a part of their capacity to do their work, and it is interesting to note that in the decrease of the rate there is also an increase in regularity.

A slow, digitalized heart will often have a pulse extremely difficult to recognize so far as the irregularity due to fibrillation is concerned. The heart is still fibrillating, but, feeling it at the pulse, it is only occasionally you are able to say it has an irregular rhythm.

*Presented at the second annual meeting of Minneapolis Clinic Week on the afternoon of May 7, 1919.

There is another interesting point, and that is that a good many cases of auricular fibrillation—I am beginning not to be surprised at the frequency of them—do not have a rapid heart at all, even though digitalis is not used. I am beginning to believe that the reason of the combination of slow pulse with auricular fibrillation is the fact that the bundle of His in the heart is already diseased, affected by partial block, and in such a heart as that we get no marked benefit from digitalis; but the benefits from digitalis in auricular fibrillation are principally due to slowing of the pulse-rate, giving the heart a chance to restore itself during the pause, and to decreased irregularity of ventricular contraction.

Dr. Andrews: Will you answer a question? Do you find in auricular fibrillation that the heart misses beats, or is there a bad rhythm?

Dr. White: No, it is not the missing of beats; it is simply the bad rhythm. There is no missing of beats. We might have a case of auricular fibrillation with a complete block of the bundle of His, in which the ventricle is responding absolutely regularly to impulses that arise in the conducting tissue. That is owing to complications which can only be recognized by an electrocardiographic study.

Dr. Leonard Day: Professor Osler used to tell us that the greatest use we had of digitalis was in the steadying of these irregular disorders. At the time I studied, we did not know anything about the fibrillation or fluctuation or what not. One of the early speakers points out that we get these cases in the old, worn-out hearts. I have had the experience of having them in a number of comparatively young people, between the ages of twenty and thirty; and I have been rather surprised that some of the authorities take the view that we get these cases only in the older people. I would like to have that point cleared up if it can be.

Another thing that interested me was that after the abuse of digitalis we often find fibrillation. Dr. White this morning in his talk brought out the point that like cures like, but I do not quite understand why the injudicious use of digitalis would produce fibrillation, while by the stoppage of its use in those cases we get a restoration to normal.

CHRONIC MYOCARDITIS AND ANGINA PECTORIS

By J. W. Bell, M. D.
MINNEAPOLIS

There still exists a marked tendency in the profession to stress unduly the importance of valve-lesions, forgetting that in the last analysis muscle-function determines cardiac efficiency. Unfortunately, text-books on pathology fail to emphasize the importance of myocardial changes. The pathologist and the clinician speak a different language, consequently their statements fail to harmonize. We see the pathologist and the clinician trotting, each on his own side of the hedge, each intent on his own scouting and his own bearings, and neither able, apparently, to reconcile his own observations with those of his comrade.

The term "chronic myocarditis" is not a happy one, for it implies inflammation, whereas degeneration is more often found.

In this brief paper the term "chronic myocarditis" is used in its broadest sense to include any morbid changes which manifest themselves clinically in the weakened myocardium, the result largely of fibroid or fatty changes, in persons at or beyond middle life, previously free from valvular disease.

Symptoms.—Chronic myocarditis is insidious in its onset, latent in its evolution, and erratic in its course, invariably causing, sooner or later, the death of the patient. You are all familiar with the following clinical picture. An active business man, usually beyond fifty, of sedentary habits, a free user of tobacco, a daily moderate user of alcohol, and a generous eater, begins to suffer from breathlessness on the slightest exertion, also from precordial discomfort at intervals, especially if effort follows a full meal. Excitement, overwork, or worry precipitates palpitation; he becomes painfully conscious of the presence of a heart; consults his physician, who finds a pulse usually irregular in rate, rhythm, force, or tension, and often intermittent. A physical examination of the heart and vessels reveals a weak, diffused impulse in the nipple line, and the arteries unchanged or slightly thickened. On careful percussion the deep cardiac dullness is found slightly increased. On auscultation the heart-sounds may be practically normal, but, as a rule, the first sound is short and feeble, with variable accentuation of the aortic sound.

Unless the true condition is promptly recognized and counteracted by judicious advice and treatment we see the shortness of breath, precordial discomfort, and other symptoms of myocardial weakness increase from month to month, gradually removing this once active man of affairs from his sphere of usefulness, and, sooner or later, causing his death.

Diagnosis.—Chronic myocarditis gives rise to no pathognomonic signs; consequently in the early detection of the disease much depends on the judgment and experience of the clinician.

He should keep constantly before him the fact that the vast majority of persons who begin to manifest signs of cardiovascular disease after middle life suffer from myocardial disease rather than valvular. In the beginning of every suspected case of myocardial disease a complete history should be taken, especially as to age, family tendencies, habits, and previous diseases. The urine should be carefully investigated for evidence of renal disease. The diagnosis is based largely on the history, age, state of vessels, and symptoms, rather than on evidence of physical changes in the heart. In the majority of cases we must be content with a diagnosis of myocardial insufficiency. As to the exact nature of the myocardial changes present in a given case we can only speculate.

Treatment.—For the purpose of treatment the clinical course of the disease may be divided into two periods or stages: (1) the period of progressive and often slow development of myocardial weakness accompanied by breathlessness, precordial distress, irregular pulse, and occasional attacks of palpitation; and (2) the period of advanced myocardial weakness indicated by constant precordial distress, dyspnea, cardiac asthma, Cheyne-Stokes breathing, palpitation, tachycardia, angina, and, later, all the symptoms of general venous engorgement. Each individual case must be carefully studied as regards the existence of any constitutional vice, condition of heart and arteries, the character of the pulse, and the digestive powers. Our initial endeavor should be to discover and remove every possible cause of cardiac irritation and embarrassment. Our second endeavor should be so to regulate the diet, exercise and habits of the individual as to bring the general nutrition, as well as that of the heart muscle, up to the highest possible point, and there maintain it.

For this purpose, in addition to hygienic and dietetic measures, general tonic treatment, consisting, according to indications, of strychnine, arsenic, and iron, is indicated. The question of exercise must be carefully considered in relation to each individual case, and with special reference to the condition of the myocardium. In the large majority of cases absolute rest in the recumbent position will be found necessary for a few weeks. The patient's habits should be carefully regulated, and tobacco and alcohol should be interdicted. The patient should be urged to lead a quiet, orderly, and temperate life, as free from worry and excitement as possible. The diet must be adapted to the digestive powers and the wants of the system. All foods inclined to induce flatulency should be excluded. He should be advised to sleep and eat regularly, eating three meals daily, composed of concentrated, nonfermentative nutritious food, suited to the requirements of his case. No solid food should be taken between meals, and but little fluid with meals. Patients should be urged to sleep at least ten hours out of twenty-four, with a midday rest of one or two hours following the midday meal.

In order intelligently to advise and treat an individual suffering from chronic myocarditis we must inquire carefully into his heredity, also have clearly in mind the etiological factors responsible for the varied pathological changes present in chronic myocarditis. The fat, flabby man of sedentary habits must of necessity receive different advice and treatment from that indicated for the thin, ill-nourished individual. In the management of myocardial insufficiency we must rely largely on rest, graduated exercise, massage, resisted movements, saline baths, general and cardiac tonics, and saline cathartics. Unfortunately, these patients do not present themselves for treatment until pronounced weakness of the myocardium, as shown by marked venous and visceral congestion, has occurred, indicating the second or advanced stage of the disease. We are then confronted with the problem of medicating a weak and degenerated heart muscle in an individual having, in the majority of cases, by virtue of his age, suffered certain vascular as well as extravascular changes, causing increased intra-arterial and cardiac blood-pressure. In all advanced cases absolute rest in bed must be enjoined, the length of time depending on the indications present.

The treatment of advanced cases, accompanied by high blood-pressure, pronounced venous engorgement, and anasarca must, of necessity, be palliative. For the reduction of the more or less constant high arterial tension present in many cases we rely on the iodides and nitrites. As the action of the iodides is more prolonged, they are to be preferred. Digitalis, strophanthus, spartein, caffein, and strychnine render excellent service in giving tone to the weakened myocardium, and, in case of hypertension, should be combined with a vasodilator, like sodium iodide, nitroglycerine, or sodium nitrite. I desire to emphasize the value of long-continued small doses of digitalis, combined with a vasodilator, in myocardial disease associated with arteriosclerosis or chronic renal disease. The morning saline, aided by an occasional dose of calomel at bedtime, adds

much to the comfort of the patient, and aids in delaying the evil presence of venous engorgement and anasarca.

In closing, I desire to call attention to a not infrequent intensely painful complication,—angina pectoris. The symptom complex designated "angina pectoris" belongs to the class of reflex protective phenomena, where the symptoms are evoked by an organ reflexly stimulating certain areas in the central nervous system. The stimulus from the exhausted heart to the spinal cord irritates the nerve cells in close proximity to the nerve conveying the stimulus from the heart. The nerves thus irritated respond, sensory nerves by pain felt in their peripheral distribution, motor nerves by contraction of the muscle-constriction of the chest wall.

The following case will serve to illustrate the behavior of angina pectoris complicating chronic myocarditis, undoubtedly due to coronary sclerosis.

E. D., aged 52; single; lumberman. Temperature and Wassermann, negative. Family history, negative. Personal history, negative, except one slight attack of articular rheumatism in 1910. In October, 1914, while exercising violently at a high elevation, he experienced the first evidence of precordial constriction, which ceased promptly on resting. In December, 1915, he had sudden attack of precordial constriction and pain, extending to both arms and to the fingers of the left hand. From that date until his death he could provoke an attack any time of the day or night by exercise beyond a given point.

This patient came under my care following the December, 1915, attack. The heart was slightly enlarged, and the palpable arteries very slightly thickened. He remained under observation until his death, late in November, 1917. During the last few months of his life the heart weakened, and a slight, soft, systolic apex murmur appeared, due evidently to relative insufficiency of the mitral valve. The attacks increased in severity, and death occurred suddenly while the patient was at stool.

Patients with angina may live many years. John Hunter lived twenty, and one of our representative citizens will soon end his sixteenth year since the first of many attacks occurred, and bids fair to continue, in spite of marked cardiovascular changes. Herrick gives the average as three years in his series of fifty cases.

An attack of angina calls for prompt treatment. Amyl nitrite should be promptly and freely used, morphine and nitroglycerine hypodermically, and heat applied to the chest.

Having tided the patient over the attack, he or his nurse should be supplied with amyl nitrite, morphine, and nitroglycerine, and carefully instructed how to use each in case of another attack. A physician has not fulfilled his entire duty to the sufferer from angina if he neglects to guard against future attacks.

DISCUSSION

Dr. L. A. Nippert (Minneapolis): The description of myocarditis by Dr. Bell has been so thorough that I have little to add. There are a few points that may be of interest. In some of those cases we find a depression that is very alarming. Furthermore, the heart will not respond to exercises; when you have the patients go through some exercises the heart will not respond as quickly as a normal heart will. Occasionally we find a low blood-pressure, which I think is of rather ill omen also, meaning that the heart does not have force to propel the blood through the vessels under sufficient pressure.

I fully agree with the doctor that the physical signs are often very deceptive, that the patient may appear in comparatively good health, and really the history is one of the most important points. When these patients complain of shortness of breath on slight exercise or going against the wind or up a small hill, or if they have pains passing down into the arms and legs they have myocardial degeneration, and, of course, if these conditions become more marked, we have symptoms of angina pectoris.

Before we decide definitely that a patient has angina pectoris, unless we attend the patient in the attack, we should be careful to exclude nervous conditions or malingering. You will pardon me for giving you a little illustration of that kind.

I was called to the City Hospital to see a patient that was picked up in the street with angina pectoris. While I was there he had an attack. His hands cramped up, his face flushed, and he had a terrific pain in his side. There was a screen about him. There was something about the patient that made me suspicious. I discussed it with the interne, and he was amazed that I did not agree with him. We went in again, and he had another attack. While he had the attack the screen fell over, and the man looked around. That was to my mind the best sign that he did not have a genuine angina pectoris. I stopped the morphine he had been taking, and a day or two afterwards he went away, and was feeling much better. The next day I read in the paper that he was picked up in St. Paul in a similar condition, and I was afraid I had made a mistake; but he was a malingerer, and did this to get the morphine—I found that out later.

The *x*-ray will help you to make some diagnosis of myocarditis by showing the condition of the heart a little more closely than you can make out by percussion.

Next to digitalis one of the greatest heart stimulants is opium, and in angina pectoris there is nothing that will quiet the patient like a dose of morphine or opium, and they give him the best chance of recovery from a sudden attack.

I wanted to mention a case where I was called in to see a candidate for life insurance where there was an aortic diastolic murmur, which was distinctly musical. Because of this murmur he was promptly rejected. A year afterwards I saw him again, when there was no murmur and he was accepted. He died within ten days from hemorrhage. We had a post-mortem. His heart

was perfectly normal except this condition of the ventricle. The policy had not yet been delivered to him, but his wife got the $10,000 anyway.

Dr. J. W. Andrews (Mankato): I would not take this time if anybody else would. I want to ask Dr. Bell to state in his closing what pathological conditions he finds in this weakened heart, in myocarditis, aside from the dilatation. Then I want to emphasize this one thing, which Dr. Bell did emphasize, namely, that the valvular lesions of the heart at that time do not concern the physician as do the other diseases of the heart. We naturally think in any valvular lesions we get a low pressure. If we study the mechanics of the heart that would be true, but when we go into the question that the heart has potentiality, that it has reserve force, and that reserve force is brought into action by nature, whether there is hypertrophy or not, nature brings that potentiality into force, and consequently the blood-pressure is not lowered, and perhaps with a bad valvular lesion will remain perfectly normal.

Dr. Bell (closing): In the diagnosis of angina vera, care should be exercised to eliminate angina spuria, a condition met with in the neurotic and the hysterical.

In answer to Dr. Andrew's question regarding the pathologic changes most frequently found in chronic myocarditis: they are degenerative in character, in most, if not in all, cases, and are either fibroid or fatty.

The term "chronic myocarditis" is a misleading one, and should be banished.

The Chairman: I infer from Dr. Andrew's question that he referred particularly to the clinical changes.

Dr. Andrews: I referred, Dr. Bell, to the pathology of the heart, but partially referred to that. Is not myocarditis a misleading term? Is there any indication of inflammation whatever on post mortem, I mean, of the myocardium?

Dr. Bell: I think the doctor's question is a very proper one. As I suggested in my paper, there is no question but what the term is misleading. My paper did not deal with what is termed "myocarditis." Certainly, it did not deal with the changes, for instance, occurring as the result of infectious diseases, and the only one we would consider would be the interstitial form of myocarditis, leading to marked increase in the fibrous tissue and later to myocardial weakness.

THE HEART IN INFANCY AND CHILDHOOD

By F. C. Rodda, M. D.
MINNEAPOLIS

The heart and its disorders in early life have received but little attention in the past. The physician applies to this problem the knowledge and experience gained in dealing with conditions found in adult life and advanced age. Usually the only differentiation made is the dosage of the drugs used. The child's heart is considered merely a miniature of the adult's. I believe this is fundamentally wrong.

PECULIARITIES OF THE HEART IN INFANCY AND CHILDHOOD

A little consideration will show that we have certain conditions found only in this period of life; on the other hand, certain conditions found in the adult are absolutely lacking. We have, first of all, a new circulatory system,—a heart muscle free from changes produced by the intoxications of chronic disorders, normally elastic vessels of large volume, and an unusually low blood-pressure. The hypertrophied heart muscle, the sclerosed coronaries, atheromatous peripheral vessels, renal changes, and high blood-pressure of the man of fifty years are entirely absent. On the other hand we have a heart and circulatory system which must keep pace with a very rapid body-growth. The body-weight and hence the blood volume triple in the first year of life. Only a normally developed heart, or one approaching the normal, can meet this demand, which explains the large mortality from congenital-heart defects in the first days and months of life.

Further: we have a heart which is very unstable as regards nervous control. Marked variations in rate and rhythm must be considered normal. In a child the heart, from trivial causes, may be quickly accelerated to 200 beats per minute, while certain other conditions may slow the rate to 35 or 40 beats per minute.

Arhythmias of extreme degree and of certain types are normal in the child. A very marked irregularity, the so-called sinus arhythmia, accompanying the phases of respiration is a constant phenomenon. McKenzie states that in the child a heart which remains perfectly regular and does not respond to respiratory changes is not normal. Extra systoles are very frequently found in children, and, from my experience, are of little moment except as indicating an unstable nervous control.

Paroxysmal tachycardia and heart-block are found occasionally, though more rarely than in later life, and, so far as I know, with a like interpretation to these findings in the adult.

Congenital defects and anomalies are further instances of peculiarities in early life. They are much more frequently found in infancy, for

only patients with the mildest forms survive childhood. Some are entirely incompatible with extra-uterine life. A large percentage of these hearts break down in the first year as the result of the great increase of work caused by the rapid body-growth. These defects and anomalies occur in great variety. Some are rare and interesting from the developmental viewpoint, but are of little clinical significance. Such a case is the blue baby whose heart cannot functionate, and which cannot be resuscitated after birth. The more common ones for our consideration are the following:

1. Absence of the interventricular septum.
2. Patent ductus arteriosus.
3. Pulmonary stenosis.

The diagnosis of the exact lesion or lesions is largely academic and often impossible, because of various combinations. One statement, however, usually holds true, that in those cases showing extreme cyanosis the pulmonary vessels are apt to be involved. As diagnostic points the babies are usually blue, cyanosis deepening on exertion; often clubbing of the fingers is present; percussion may demonstrate increased heart-dullness, and an *x*-ray plate seldom fails to show a large, often globular heart shadow, at times nearly filling the chest cavity.

The presence or absence of a murmur may be quite misleading. We have seen a case in which there was a complete absence of the interventricular septum with all the other classic signs of congenital defect and no murmur. Again, a loud murmur has been present, but section has shown no pathology. These cases are of interest largely from the standpoint of prognosis. There is no treatment. Medication will not supply a missing septum, nor dissolve the stenosis of a ring.

The outlook for life is poor. Many die in the first days; a few survive the first year, to succumb later to pneumonia or other upper respiratory infection. A very small number live beyond puberty.

FUNCTIONAL DISORDERS

We have already mentioned irregularity of the heart in childhood as a functional affair. Under this heading I wish to discuss certain murmurs.

The old idea of establishing a diagnosis, prognosis, and treatment on the presence, character, and line of transmission of a murmur, is in error and is about to disappear from medical teaching. This has resulted from the great work of McKenzie and his pupils, from electrocardiographic studies, and a better knowledge of pathology. It is eminently true in infancy and childhood that a murmur of itself is practically of no significance. With careful auscultation in the child, a murmur may be demonstrated in 60 to 80 per cent of all cases. Most of these are the so-called "functional" or "accidental" murmurs. They are usually heard over the base, not well transmitted, inconstant, and varying with time and position. It is also surprising the frequency with which one finds murmurs of the same character during acute febrile disturbances. They disappear on recovery. These murmurs do not rest on any permanent organic changes, and are explained by the presence of anemia, debility, and loss of muscle tone with accompanying slight dilatation.

Another functional murmur frequently heard at the apex in systole probably has to do with the relationship of the heart and the overlying lappet of lung. It is modified by respiratory changes.

These functional disorders require no treatment, except as concerns the general nutrition of the child. The murmur should not be mentioned to parent or patient. It is better ignored.

ACQUIRED ORGANIC HEART LESIONS

These are seldom found before the 2d or 3d year of life. They are more common during school age, concomitant with the incidence of contagious diseases and the acute upper respiratory infections, such as tonsillitis and its sequela, rheumatism. The symptoms, diagnosis, and treatment of these disorders are amplified in texts and works on medicine.

However, I wish to call your attention to murmurs found in organic lesions. They are signs of damage done. A disease process producing changes in the valves is seldom, if ever, limited to them, but is an expression of injury to the whole heart structure, a true pancarditis.

Studies of the heart muscle as to its function, its conduction, and its power of recuperation, must be considered with the murmur for a proper diagnosis and prognosis. And, further, let us not forget that we may have the gravest heart disturbances in children with no murmur perceptible.

TREATMENT

I believe the Hippocratic oath is violated more often in the treatment of heart conditions in children than in any other field of medicine. On the one hand there is mistreatment and overtreatment of functional disorders; and, on the other hand, there is lack of treatment and control in true organic disease.

I am sure we have all, in routine examination of children, discovered a loud, harsh murmur, and made the diagnosis of heart disease. We may have been politic, and used the expression "a little trouble with the heart." After repeated cardiac examinations, admonitions as to exercise are given, or even a long rest in bed is advised. Subsequent study may prove the condition to be of no consequence, but the damage has been done. The solicitious parents, constantly in fear of serious difficulties, limit the child's activities, and the little patient is set apart from its playmates and presently becomes a full-fledged neurotic. It is to be noted that the thin, undernourished child of a neurotic mother is a most likely candidate to have a functional murmur and to come under our care. It is a good wager that the child complaining of heart symptoms has only some functional disorder of rhythm, while the converse, that rather severe organic disease may occasion no subjective symptoms, is also true.

Unfortunately, the child with serious cardiac disease is often neglected. Such a child, having repeated attacks of tonsillitis and rheumatism, receives perhaps a little sodium salicylate or digitalis, and is dismissed. Each attack adds a greater burden to the heart until at last it breaks down.

The least that could be done would be the removal of diseased tonsils and adenoids. This at present is usually attended to by our colleagues engaged in nose and throat work. It is occasionally neglected from fear of giving a patient with heart symptoms an anesthetic. This fear, from our experience, is ill-founded. It is surprising how well these cases stand the anesthetic and operation.

In adult work we hear much of focal infections about teeth, and physicians are alive to their responsibility in this manner. Yet we see children with putrid mouths,—nearly all of the teeth carious, with sinuses in the gums discharging quantities of pus, and no note taken of it. These conditions are supposed to be innocuous in the child because they involve the "baby teeth." I am sure this is wrong. Such conditions in the child carry possibilities of end-results comparable to those seen in the adult. However, much of the blame for this rests with the dentists. It is often almost impossible to have these teeth cared for and extracted—we are told it will deform the jaw. The shape of the jaw must be preserved even if the child dies from heart injury.

After removal of the tonsils and adenoids and the proper treatment of carious teeth, there remains much to be done. Digitalis does not fill the bill, and the child need not become an invalid. A little time spent in studying the injury done the heart and its capacity for work, will give us ideas as to how much the child can safely do. Studies made in the army show that young adults with heart lesions improved under regulated exercises. This will be found truer in children. A sensible control of the child's activities may make him a useful member of society, his only handicap being inability to secure life insurance because of a loud heart murmur. Even the murmur may disappear.

What I wish to emphasize and bring up for discussion is the placing of the heart disorders of infancy and childhood in a proper perspective.

Let us not approach these problems with the preconceived ideas gained from the study of an old fibrotic heart muscle with irreparably damaged valves and arteriosclerotic blood vessels. But, rather, think of the child's heart as a young organ, with peculiar physiologic properties, that it can suffer injuries which may be repaired, in the early stages, but which, if neglected, may lead up to the complex found in the broken-down heart of the adult. We may then be able to do much more for the child and perhaps throw new light on heart disease as seen in later life.

DISCUSSION

Dr. S. Marx White (Minneapolis): I am going to repeat, if I may, because I want to call attention to an extremely important paragraph in Dr. Rodda's paper. That was the one in which he referred to the so-called functional murmur. He brought out the fact that in a great many children this murmur will appear without other very definite signs of cardiac disease, and certainly without any sign so far as valvular lesion is concerned. As I have attempted to study the heart I have had a growing feeling that we have been over-emphasizing the auscultatory signs in the heart, and particularly when there was no other evidence, no other data to support that finding, that is, the finding of the murmur,—without enlargement, without displacement of the apex, without an increase in the size of the apex, without vascular lesion accompanying it, without evidence of dyspnea on exertion, or other signs of limited heart capacity or some other confirming feature.

I had an opportunity in our work in France to study the hearts of a very large number of normal adults, and I was struck by the fact that, following acute infections, exhaustion, gassing, or anything which will lower for a time the resistance, murmurs of a certain type were very common, and the occurrence of the murmurs signified absolutely nothing, I believe, so far as the valves themselves were concerned. And I believe we can go further and say that they signify nothing so far as the

pathology of the heart muscle is concerned. For that reason I am very much inclined to approve of the designation which Cohn, I believe, first gave to these murmurs some months ago when he decided that he would call them unimportant murmurs, that is, not functional but unimportant murmurs. I confess to some difficulty in deciding when a murmur is unimportant, but I believe that in a heart of normal size the absence of rheumatic history, the occurrence of the murmur in certain postures and its disappearance in others (most likely to occur when lying down), places the responsibility upon us of not limiting our examination of the heart to a single position but get the patients into different positions. My idea as to the proper positions is changing. Whereas I used to think if I could turn the patient in any direction to get the murmur it would be proper, I am satisfied if I can turn him in a position where I can eliminate the murmur I will be getting more information than otherwise.

Finally I want to say that I am beginning to feel that the stethoscope has less and less value in the study of the heart. It is a valuable instrument, it is easy to carry and it is the first thing thought of, but in the study of the heart I am beginning to believe it is the last thing to use. Emphasis on a systolic murmur as indication of heart disorder, is like leaning on a broken reed.

Dr. E. L. Tuohy (Duluth): I arise to emphasize the remarks just made by Dr. White. The experiences I had in passing on a large number of army recruits, and judging their cardiac fitness, have brought to my attention the large number of people in civil life who have evidences of circulatory weakness. Dr. Rodda's paper suggests to me that his findings in children, and the conclusions he draws therefrom, are quite as applicable to the young adult. There is the same need of unusual care in avoiding overemphasis on the purely cardiac side of those people endowed with an underdeveloped and unstable physique. It is unfair unduly to emphasize the rôle of the nervous system in this underdevelopment, and I feel that this is only one important factor.

The very greatest damage can be done these young persons by diagnosing a primary cardiac defect largely on the basis of your auscultatory findings. A rheumatic history or a history of infection precedes nearly all of the true cases of valvular disease in young people. A study of those cases showing a presystolic murmur, indicative of mitral stenosis, helps corroborate this. A man who has trained his ear to pick out all adventitious sounds dislikes to discharge a large family of systolic murmurs. Nevertheless, Lewis' dictum holds: "As isolated phenomena they are meaningless."

A further analysis of the "irritable hearts" or "neurocirculatory asthenics" is increasingly difficult. They simulate excessive thyroid activity, but are certainly not a part of it; they may present the typical syndrome at one time, and under different conditions appear normal. For the time being, it is well to remember that the larger number fall into the group of primarily or congenitally asthenics; a smaller group concerns those in convalescence from acute infections or influenced by chronic and persistent infections.

Dr. Rodda, fortunately, emphasizes the point of view that both the patient and the medical adviser should have; with it far better results are obtainable.

SURGERY OF THE HEART AND PERICARDIUM

By J. Warren Little, M.D., F.A.C.S.
MINNEAPOLIS

The large number of procedures advocated for the relief of pericarditis, and the differences of opinion that exist even now regarding the safety of the various methods, indicate the unsettled status of the question of the treatment of pericarditis at the present time. No attempt can be made within the limits of this discussion to consider, or even describe, the various methods, but those which seem to the writer most conservative, will be described in some detail.

Normally, the visceral and parietal layers of the pericardium are in contact and moistened with enough serum to prevent friction. The heart is firmly attached at its base by the large vessels, but the apex of the heart has a limited range of motion. Since the pericardium, like the other serous cavities of the body, is a potential cavity, or, in other words, the two layers of pericardium are normally in contact, it follows that the anterior wall of the heart is in contact with the part of the pericardium which lines the anterior wall of the thorax. When there is an effusion within the pericardium, what is the effect on the position of the heart? This is answered by considering the anatomical arrangement of the interior of the pericardium. The superior and inferior venæ cavæ form a prominent vertical ridge in the posterior wall of the pericardium, dividing the cavity into two pouches, right and left, which become continuous below, with the base of the cone-shaped pericardial sac lying upon the diaphragm and occupying the costophrenic angle. In the upper part of the pericardium is a transverse fold containing the pulmonary vein, forming a third pouch in the apex of the cone. An effusion collects, first, in the bottom of the right and left pouches, and, as it increases in quantity, it rises higher in these pouches behind the heart, and tends to press it more firmly against the anterior chest wall. This is the condition found on operation, also in cases of wounds of the heart. In such cases, before the

pericardium is opened, the heart is pushed strongly forward, but, after it has been opened and the fluid permitted to escape, the apex of the heart drops backward, adding to the difficulty of placing the sutures for closing the heart wound.

The pleural cavities virtually meet in the midline, except for a small triangular space behind the lower end of the sternum and the sixth and seventh costal cartilages. This has been called the "triangle of safety" of Voinitch, for, within this area, the pericardium may be opened without opening the pleura. The long axis of this space is about 1.5 cm. to the left of the midline of the sternum, and parallel to a line running vertically through the left costosternal articulation. At about the middle of this triangular space is the junction of the sixth left costal interspace and the left border of the sternum, and at this point a needle directed straight inward would enter the anterior costophrenic pouch.

The wisdom of tapping the pericardium with a needle or trocar has been the subject of much controversy. The position of the heart immediately behind the chest wall has made it necessary to choose between the danger of wounding the heart and of piercing the pleura. Some surgeons consider the latter as the lesser of the two evils, and advocate puncture laterally outside the triangle of safety, but beyond the probable location of the border of the heart. The danger of this procedure is obvious in case the fluid in the pericardium should prove to be purulent, and, therefore, an operation that opens the pleura must be condemned. The use of a large needle or trocar has caused disastrous results in a number of cases, and should be abandoned. In fact, reasoning from these results, some surgeons have concluded that open operation alone is permissible. However, at the present time the use of a capillary trocar for purposes of diagnosis or treatment, may in some instances be justified. Some of the reasons which favor this conclusion are the following:

1. The fact that large accumulations of fluid are not likely to be found in cases of extensive pericardial adhesions; and it is these cases in which the heart is most certain to be injured.

2. Improvements in methods of diagnosis, especially the *x*-rays, enable us to determine more accurately the position of the heart and the distribution of the effusion.

3. Cases occurring in rheumatism or dropsy are almost always aseptic, and may be cured by aspiration.

4. The operation is a simple one, and can be borne by a patient who is in no condition for a more extensive operation.

5. The operation is simple enough to be used in an emergency when the facilities for a formal operation may not be at hand.

If a capillary trocar is to be used, it may be introduced in the sixth intercostal space close to the border of the sternum, at which point it should enter the anterior costophrenic pouch. It may also be introduced in the left costoxiphoid angle, and pushed forward until it pierces the diaphragm and then inward. The trocar should be withdrawn if it fails to strike fluid at a depth of 2.5 cm. In that case the attempt to use the trocar should be abandoned, and an open operation performed.

The same anatomical considerations hold good in open operations as in the operation of paracentesis. It is of great importance to avoid injuring the pleura, and, if this accident should happen, the wound in the pleura should be closed by suture or ligature. In the Kocher operation an incision is made over the sixth costal cartilage, which is then resected. The internal mammary artery, and vein, when they are encountered, are ligated and divided. The dissection is continued down to the pericardium, which can be recognized as a dense, glistening layer of connective tissue. Care is taken to avoid injuring the pleura by retracting it towards the left, if necessary. A small opening is made into the pericardium, and the fluid permitted to escape slowly. Irrigation is of doubtful value, but its use has been advocated. A soft rubber drainage-tube is inserted into the bottom of the cavity, and the pericardium is sutured to the skin to prevent infection of the anterior mediastinum.

Another method of approach, which is anatomically correct, is by an incision along the lower margin of the seventh left costal cartilage and across the base of the ensiform process. Divide the cartilage, and pass the finger beneath the sternum, between the triangularis sterni muscle and the diaphragm. Remove the seventh costal cartilage and part of the sternum. The sixth cartilage may also be removed if necessary.

All cases containing pus in the pericardium require immediate operation, and any case with fluid in the pericardium may, at any time, become an emergency case, especially if the fluid accumulates rapidly. It has been observed experimentally that the heart will tolerate the presence of fluid in the pericardium up to a certain point, but beyond that point the addition of a

very few cubic centimeters of fluid will seriously embarrass the heart, and may even prevent the auricles from filling, and thus stop the circulation altogether, producing a condition known as cardiac tamponade.

Wounds of the heart are usually rapidly fatal, but enough cases have been saved by operation to justify a brief reference to the method of suturing the heart. An incision 10 cm. long is made from the middle of the sternum over the sixth costal cartilage to the bony part of the sixth rib, cutting the attachment of the rectus abdominis. The pectoralis major is loosened from its attachment to the upper border of the rib, and the attachments of the intercostal muscles are loosened above and below.

The pericardium on the posterior surface is loosened with a periosteal elevator. The sixth costal cartilage is now cut at the point of its attachment to the sternum and to the seventh costal cartilage. The internal mammary artery and vein are seen at a point 2.5 cm. to the left of the sternum. They are clamped, cut and ligated. Underneath this point, the sternal attachment of the transverse thoracic muscle is cut, and the muscle, together with the pleura, is pushed to the left, exposing the pericardium. The wound may be carried upward along the middle of the sternum to the fourth, third, or even the second intercostal space. Then a lateral incision is made 8 centimeters long through the pectoralis major muscle to the upper margin of the costal cartilage and rib. The intercostal muscle is loosened from its attachment to the upper margin of this cartilage and rib. The pleura and transverse thoracic muscle is now separated from the cartilages and ribs, and retracted to the left, and a sufficient amount of the ribs, together with the cartilages, is turned outward to provide the necessary space for free access to the heart. In case of injury to the pleura, the opening is at once caught with clamps and later ligated or sutured.

Having opened the pericardium, if there is hemorrhage from the wound in the heart, the most effective way of obtaining hemostasis for the few seconds, required to suture the wound, is by grasping the root of the heart on a level with the right auricle between the third and fourth fingers with the heart resting in the palm of the hand, and compressing the venæ cavæ at their entrance into the right auricle. Silk suture on fine round needles should be used, and the suture should take a considerable margin of the myocardium, and extend down to, but not through, the endocardium. Great care should be taken to prevent cutting or tearing of the heart muscles; and rigid asepsis should be observed, for infection will be certainly fatal.

SELECTED DEMONSTRATIONS IN HEART PATHOLOGY

By H. E. Robertson, M.D.
MINNEAPOLIS

Dr. H. E. Robertson then presented lantern-slide demonstrations illustrating some of the more common developmental anomalies of the fetal heart, particularly patent foramen ovale, imperfect closure of interventricular septa, patent ductus arteriosus, coarctation of the aorta, and variations in the number of the aortic and pulmonary leaflets. A brief explanation from slides showing the method of development of the heart was given to account for these anomalies.

The second set of slides illustrated the lesions which may occur in the coronary arteries and the results of these lesions in the development of fibrous patches in the myocardium. These illustrations were used to emphasize the importance, in the speaker's mind, of early lesions of the coronaries as the basis for the development of later myocardial insufficiency.—The Editor.

DISCUSSION

Dr. J. W. Andrews (Mankato): I would like to ask this question: Is it not true in myocarditis of a rather extreme degree that we may, and frequently do, get some mitral regurgitation or functional regurgitation, with no change in the valves, but because of the weak muscular condition, or sometimes after acute diseases, we get a very marked mitral regurgitation that is recovered from when the patient regains his strength? That is a question I would like to ask some of these experts.

The Chairman: Dr. Robertson, will you answer the question?

Dr. Robertson: I have nothing to add. That question really does not belong to my field. I think Dr. Bell can answer it.

Dr. Bell: I referred to that rather briefly because we had to hurry along, as you know. I think it is the rule in nearly every case of chronic myocarditis I have had occasion to follow for years that the marked

change in the size of the heart's relative insufficiency will make its appearance at the apex. I mean, relative insufficiency of the mitral. It is due to the stretching of the orifice, and is not due to a diseased condition; it is simply the result of the enlargement. For instance, in the case I reported of this man—if I may have just a moment. The patient I referred to was, I think, about as troublesome a patient as I recall ever having had to deal with. He was a man that had managed men in large numbers in connection with a lumber interest in the West. He was the most irritable man I think I ever had to deal with in any form of disease; and you can realize what a factor that would be in dealing with a man with a weakened myocardium, especially due, as we believed it was, although no post-mortem was held in this case, to coronary change.

This man could bring about an attack of epicardial distress and pain at will. He had nothing to do except visit my office, too often for my comfort, because he always had a great many questions to ask, and always brought with him a notebook. He was not without fair ability in the direction of profanity, and one of his questions was: "Why, in the name of God, can these attacks not be relieved?" He was always coming in with his lips drawn and his brow knit, in an irritable mood—just the mood to get up an attack; and nothing you could say or do with this man would get him out of that mood of viewing the situation. He was apparently, when he first called upon me, in a fair degree of health. The first *x*-ray plate probably was a negative plate, and yet he went along during the two years he was under our observation until at the end we had, as the doctor suggests, a soft mitral systolic murmur, and I have no doubt if a post-mortem had been made we should have found insufficiency due simply to stretching.

TETANUS: A CASE WITH RECOVERY FOLLOWING THE USE OF LARGE AMOUNTS OF TETANUS ANTITOXIN AND SUBCUTANEOUS INJECTION OF MAGNESIUM SULPHATE

By Irene M. Blanchard, M. D.
ROCHESTER, MINNESOTA

Frank Diano, aged 7, cut his foot upon a broken beer-bottle. Two weeks later he had convulsions, which were untreated until he was brought to the Minneapolis City Hospital the following morning. Upon entrance at the hospital, his jaws were tightly set, his neck and back were stiff, and he had both tonic and clonic convulsions.

After the administration of ether, his jaws were pried apart so that a wooden tongue-blade could be put between his teeth. Tetanus antitoxin was administered as follows:

The first day, 14,000 units
3,000 units, intravenously
3,000 units, intraspinously
5,000 units, intravenously
3,000 units, injected around the wound.

The second day, 8,000 units
5,000 units, intravenously
3,000 units intramuscularly.

The third day, 9,000 units
3,000 units, intraspinously
3,000 units, intravenously
3,000 units, intramuscularly.

During this time subcutaneous injections of 20 c.c. of a 25 per cent magnesium sulphate solution were given two or three times a day, the dose being at the rate of 0.8 c.c. per kilogram of body-weight. This served to relax the muscles and to save the strength of the patient. The other medication consisted of sodium bromide, 10 gr., every three hours, 5 gr. of chloral hydrate every morning at 5:00 A. M., and two doses of morphine, $\frac{1}{12}$ gr., hypodermatically, the second night, and $\frac{1}{10}$ gr. the third night. In addition to the trismus and stiffness there had been a marked diaphoresis, some abdominal tenderness, and some spasm of the sphincters. Lemonade, grapejuice, and various forms of liquids were used very freely. At first, fluids had to be administered through the crack in the teeth made by the tongue-depresser. Later, the child could use a tube which he kept outside of his teeth just in front of the crack.

By the fourth day the patient was much more quiet and relaxed. In addition to the sodium bromide and chloral hydrate, he received only 5,000 units of tetanus antitoxin, intramuscularly, but the next day he was worse. He was more rigid and irritable, and his temperature and pulse were high.

Vigorous therapy was again resorted to and continued for ten days, as much as 13,000 units of tetanus antitoxin being administered, 8,000 intravenously and 5,000 intramuscularly, with two or three subcutaneous injections of magnesium in one day. After the ninth day of the attack the magnesium sulphate was discontinued, and from that time for three days only 5,000

units of antitoxin were given intramuscularly. This treatment was then discontinued.

In two weeks the patient had received 132,500 units of tetanus antitoxin, and 380 c.c. of magnesium sulphate. There were no abscesses following the use of the magnesium sulphate, and no embarrassment of respiration after its administration. The part where the injection was given was vigorously rubbed until after the fluid had been absorbed. The child had a slight urticaria upon the face and body at about the tenth day of treatment. At the end of two weeks the child could turn over and turn his head from side to side, but there were still some stiffness of the back and some trismus.

In three weeks the patient could open his mouth so that he could eat, but he did not enunciate very well. A month after the attack he could talk plainly and had entirely recovered from the tetanus.

This tends to show that a large amount of tetanus antitoxin can be administered and that in cases of this kind it is better to resort to vigorous treatment.

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DOES MEDICAL EXAMINATION OF EMPLOYES PAY?

The director of the medical department of a Minneapolis plant employing over 5,000 men asked himself the above question, and answered it in emphatic tones in these words:

"It pays a hundred times over. Every day, by the prompt cleaning and dressing of apparently trifling wounds, we are averting damage suits for thousands of dollars. The thorough examination which every applicant for work undergoes safeguards both him and us, and reduces our labor turnover by enabling us to fit the right man to the right job, with reference to his physical, as well as his technical, ability. The eyesight of the prospective machine-operator is thoroughly tested; unless it is perfect, he is apt to mistake a signal, and drop ten tons of bricks on somebody. When we need men for stonework or grinding, we do not select those of the physique which shows a natural tendency to tuberculosis, even though the disease may not be actually present; and we see that the man with a weak heart is not set to shoveling coal or moving packing-cases."

This particular plant is believed to be the pioneer in Minneapolis in recognizing the possibilities of industrial medicine along preventive, as well as curative, lines. Eight years ago it employed a physician for an hour a day, principally, to give surgical aid; but soon came the realization that increased medical and surgical attention was a matter of benefit, not only to the employes, but to the company; and today that plant has four doctors and six nurses, and there is no hour of the day or night when treatment is not obtainable by their workers.

The installation of a dental clinic is planned, in which work will be done for minimum fees. Last year the company spent $30,000 in its medical department, exclusive of compensation claims that were paid; and they are confident that the $30,000 saved them a far larger sum.

Three Minneapolis plants have well-developed systems of periodic medical examinations of employes, and require that applicants for employment undergo such an examination. Many more furnish medical and nursing care when the need for it is obvious.

The employers say frankly that it pays, from a business, as well as from a humane, viewpoint, to do this; and they declare that the service increases the efficiency of the workers by from 10 to 25 per cent.

HEALTH ORGANIZATIONS BEWILDERING IN NUMBER, BUT HOPEFUL IN RESULTS

When one reads of the number of health organizations now under full headway, especially in the Northwest, and of the number of people engaged in the work, not a little of it amateurish, he wonders what the outcome will be. A partial list of these organizations can be made offhand, but such a list will serve to indicate the extent of the work. There are the tuberculosis and cancer organizations which are both national and local, with the prestige of age and experience. There are the venereal-disease groups, which are mostly state organizations, with large resources in the form of abundant money and state legal support. There are the child welfare clinics, mostly local, but backed by mothers' love and fathers' generosity, which assure the largest possible degree of success in temporary work. There is the boys' cleanliness and helpfulness work, splendid in all it seeks to accomplish, but, of course, very dependent upon a burst of enthusiasm. The public nurses' work may prove to be the best of all. There are the dental clinics, with direct and immediate results almost beyond comprehension. There is the soldiers' reconstruction work, with certain direct results and with indirect results almost beyond calculation. There is the work for the blind, private and public, enlisting the sympathies of the whole world.

The list is indeed a long one; and no sane man

would cut off a single organization at this stage, but every thoughtful man will see the need of a warning against the inevitable loss of enthusiasm in these organizations. Far be it from us to put this warning in the form of a pessimistic note; we would rather put it in the form of an appeal for strong men of great executive ability to shape and direct this great force of public opinion into permanent channels—into public-supported organizations that will abolish, quickly and permanently, the causes and the results of disease, so far as it is the power of men to do.

We rejoice in the activities of all these organizations, in the splendid enthusiasms that create them; and we make appeal for their preservation, for an increase in the enthusiasm back of each; and we especially appeal to medical men to harbor no jealousy of the layman or the physician who directs effectively one of them.

SPECIALISTS IN THE FOREGROUND

The enormous and rapid mobilization of medical men has brought out some very interesting features during the time since America entered into the war. It was thought, at first, almost an impossibility to enlist or draft or mobilize a sufficient number of medical men to take care of American casualties; but, notwithstanding the large number of medical men who have been working with the expeditionary forces all over Europe, the care of the American Expeditionary forces has been remarkable.

The casualties that have sprung from war conditions, either from disease or wounds, have shown the necessity of a wider recognition of the men in special medicine; and the results of the casualties have brought prominently into the foreground the neurologist and the orthopedist. The care of men in camps has also brought out the fact that the urogenital specialist has done some very remarkable work, and has preserved the health of perhaps more than a million men, or has, by his advice and treatment, relieved the infected men from the effects of their social diseases.

Then, too, the situation has brought closer together the neurologist and the surgeon, and incidentally has brought into a more confidential relation the surgeon and the internist. The neurologist and the surgeon, of course, have been interested in the repair of wounded nerves, of fractured skulls, or injuries to the spine and spinal cord; and, above all, the neurologist has been most frequently called into consultation to determine the mental condition of both the unwounded and the wounded, to conserve the men from war strain, and to rehabilitate, re-educate, and advise the men who are primarily unstable in their tendencies.

The results from all sources have been exceedingly gratifying, so much so that the officers have waked up to the fact that there are too few neurologists in the field of medicine; and it is said that, whenever a medical unit returns from Europe, each man is carefully interrogated, and if he is a neurologist or a psychiatrist, or if he is an orthopedist, he is firmly but kindly requested to remain in the service. Even though he may object, he is promptly assigned to duties in reconstruction hospitals and other hospitals, where his specific training is needed. This accounts for the fact that comparatively few neurologists have been returned from the assigned localities, as the Government has found that they are extremely necessary to the comfort and recovery of the soldiers.

It has been said, too, that the war conditions, as well as the influenzal or disease conditions, have changed the neurological map, and that from his new experience the neurologist will revise many of his methods. It has also brought prominently into the foreground the fact that the neurologist and psychiatrist not only advise as to physical injuries to the nervous system, but they are the mainstay as advisers for the unstable and the partially unfit.

It all shows that our medical educational centers must encourage men in these three specialties. The whole medical field will perhaps be simplified by the intensive training and the opportunities for all men,—surgeons, medical men, and specialists,—to revamp their ideas, to change their methods, and to put medicine on a higher, but simpler, basis.

THE COUNTRY AND THE CITY PHYSICIAN COMPARED BY AN EXPERT

Dr. William Brady, who writes the syndicated medical "stuff" (this is a technical newspaper word, and has no ignominious suggestion or connotation in it) for a large group of newspapers, says that "country doctors, take them by and large, are on a plane about eight notches higher than city doctors." We agree with Dr. Brady and accept his diagnosis; but we are compelled to do so with the query of the politician in, we believe, the "Texas Steer." He was seeking an ambassadorship to Great Britain, or elsewhere,

and was offered the consulship to Dahomy. To avoid delay, and a possible change of mind on the part of the president (not Wilson), he telegraphed in these words: "I accept, but where in the h— is Dahomy." And so we say: "Dr. Brady, we accept your diagnosis, but what in the h— is a notch?" Possibly here is the answer: We once knew a pioneer woodsman, who was a great hunter; and whenever he killed a deer he cut a "notch" on his gun-stock, which soon became covered with notches to toll off the dead. We cheerfully grant the country doctor such superiority by "eight notches."

MEDICAL CERTIFICATE RECIPROCITY

It is known, probably in every state in the Union, that the Minnesota examination of candidates seeking licenses to practice medicine in this state, is rigid; and it is equally well known that the examination is both practical and fair. One requirement beyond the examination is likewise rigid; and it, too, is fair. This requirement is that the graduate in medicine, if graduated in 1912 or since that date, must have had two years of university work,—that is, he must have a foundation upon which to build his medical education. Another requirement is that he must be a graduate of a high-grade medical school.

That the Minnesota requirements are reasonable and fair is clearly shown by the large number of states with which reciprocity in granting licenses to practice is established. At our request, Dr. Thos. McDavitt, of St. Paul, the Secretary of the Minnesota State Board of Medical Examiners, furnishes the following detailed information concerning reciprocity with other states:

Reciprocal relations on the basis of an examination only, have been established with Arkansas, Colorado, Delaware, District of Columbia, Georgia, Illinois, Kentucky, Louisiana, Maine, Maryland, Mississippi, New Jersey, North Carolina, North Dakota, Pennsylvania, South Dakota, Texas, Virginia, West Virginia, Wisconsin, and Wyoming; and on the basis either of an examination or of a diploma from a reputable medical college without an examination, provided the diploma and the license were issued prior to 1899, with Alabama, Indiana, Iowa, Kansas, Michigan, Missouri, Nebraska, Nevada, New Hampshire, Ohio, Tennessee, Utah, and Vermont.

All applicants for reciprocal registration must appear in person and pass a supplementary practical examination, which consists of laboratory work in pathology, both microscopic and macroscopic, urinalysis, and a clinical bedside examination at the hospital.

The examinations are held in January, April, June, and October.

The Board requires a four-year medical course at a recognized medical college which demands as a minimum entrance requirement two years of university work. This rule applies to all graduates of 1912 and thereafter.

HOSPITAL STANDARDIZATION

The Minnesota Hospital Association, which met in Minneapolis last week, had an excellent and full program, and at its conclusion did a good job by electing Dr. L. B. Baldwin president for the coming year. The organization has grown very rapidly since its inception, and promises to be a very important factor in the state. The probabilities are that it will be the sponsor for hospital standardization, now advocated by the American College of Surgeons.

The principal addresses, which were given by Dr. John H. Bowman, Director of the American College of Surgery, and Fr. C. B. Moulinier, President of the Catholic Hospital Association, and also Regent of the Marquette School of Medicine, were also given before the Minneapolis Civic & Commerce Association, and, in the evening, before a large meeting of the Hennepin County Medical Society. Neither of the speakers hesitated to offer very frank suggestions, and to be equally frank in his criticisms, not only of the doctors, but of the hospitals, and the directors and trustees who manage such institutions.

Dr. Bowman dwelt particularly on the staff organization, and was not favorable to the hospital without a staff, and particularly one that is unorganized. He asserted that very few hospitals, less than 25 per cent of the total number in the county, have a proper file of case-records. His third point was that adequate laboratory facilities should be furnished with each hospital expecting to come under the standardized classification proposed by the American College of Surgeons. He thought it would be a good thing for the staff to meet oftener, and to compare notes; that a check should be had on the physician, as well as the surgeon, at the autopsy table; that, when a surgeon or physician has gone wrong in his diagnosis, the mistake ought to be discussed before the staff, purely in the spirit of constructive criticism, and on the theory, too, that it broadens a man who makes blunders and is willing to acknowledge them.

Unless some of these suggestions are carried out, Dr. Bowman feels that there may be nationalization in medicine, such as exists in England, which would be a deplorable thing for this country, as the medical profession of the United

States has more spirit, and is willing to do more work, than would be required from the average clerk, which position is practically the plane occupied by physicians in England.

Fr. Moulinier talked on the necessity of a closer relationship between the hospital and its staff, and the people. He and Dr. Bowman have traveled all over the country, and have inspected a number of hospitals; and they are both of one mind in holding that there is room for improvement. Those of the profession who heard these speakers were undoubtedly hit on many sore points, but heartily approved of the suggestions. And it is very likely that the hospital situation here will pick up very rapidly.

These men, in their inspection, picked out two hospitals in Minneapolis that can be safely called standardized hospitals. One ventures to say that next year, if this commission comes here again, they will be able to pick out a number of others which can be put under this classification.

The "boarding-house" hospital will probably disappear; and, when the business people know that a hospital is run on a business basis and is able to guarantee the public the best possible care for its patients, there will be no question as to the support of such institution.

Hospitals which still have an open staff, admitting anyone and everyone to practice without restriction, will probably change their plan; for a hospital directed by a non-medical board of directors alone, without a staff or executive committee of a staff, to suggest what is best for the hospital and for the patients, is well-nigh out of date. Every hospital in Minneapolis that has an organized staff and an executive committee, has accomplished many reforms, and the officers (directors or trustees) of such institutions are only too glad to have competent consultants to guide them in the direction of the hospital.

The Hennepin County Medical Society is always ready to welcome a good paper or a good speaker, and the attendance on Wednesday, June 4th, to hear these men was very gratifying.

CHRISTMAS RED CROSS SEAL SALE

The Red Cross Christmas Seal Sale is coming back. Last year its place was taken by the joint Christmas Roll Call of the Red Cross and the National Tuberculosis Association; but these two organizations have decided that this coming Christmas the time-honored seal sale shall be held again, to provide funds for the benefit of tuberculosis sufferers, and for the education of the public in preventive measures.

The "biggest sale ever" is many months away as yet, but already supplies are being selected, sales forces mobilized, and advertising methods discussed. Two Minneapolis men, Mr. Otto F. Bradley, of the Anti-Tuberculosis Committee, and Dr. H. W. Hill, of the Minnesota Public Health Association, were called to Cincinnati the other week to attend a conference to decide upon such points as the design of the seal, and whether the sale should be made by personal solicitation or by mail.

Tuberculosis kills 200,000 persons every year in this country, or one every three minutes. The funds of the Red Cross Seal Sale are devoted to conquering this enemy of mankind, which is the greatest known cause of widowhood and orphanage, and the cause of one-third of all deaths between 18 and 45.

The sale this year will give people all over the country a chance once more to heed the plea of Theodosia Garrison, the famous woman poet, voiced two years ago for the Minneapolis campaign:

"Buy a pair of red cheeks to give a little lad again,
"Buy a pallid woman's face the bright eyes of health;
"Buy a broken man a hope, buy the strength he had again;
"Here be bargains wonderful awaiting on your wealth."

REPORTS OF SOCIETIES

MINNESOTA ACADEMY OF MEDICINE

The regular monthly meeting of the Academy for May was held on the 21st, instead of on the 14th. Postponement from the second to the third Wednesday was necessary to accommodate our visiting essayist. Ninety members and visitors sat down to table, the largest number ever attending a meeting of the Academy.

Following the banquet, a motion picture apparatus was adjusted, and the meeting was called to order, Dr. Christison presiding.

The committee appointed several months ago to report on the death of Dr. Cornelius Williams submitted a short sketch of his life. It was accepted, and ordered spread on the minutes. The following is the report:

CORNELIUS WILLIAMS, M. D.

Dr. Williams was born in Kentucky in 1848. He received a common school education, and took his de-

gree in medicine from the New York College of Physicians and Surgeons in 1874. After postgraduate and hospital work he began the practice of medicine in New York City, and worked as student and assistant in Knapp's Ophthalmic Institute, limiting his practice to diseases of the eye and ear, and soon became recognized as an expert in those branches of medicine. Well trained for the work at the start, he developed ability as a diagnostician, judgment as a surgeon, and skill as an operator. His early operations upon the mastoid were notable for their thoroughness at a time when much of that work was done superficially. He used, altogether, the dental engine and burrs in cleaning out the cells, and always maintained the superiority of those tools over the mallet and chisel.

Besides being a member of this Academy, he was a member of the American Medical and State Medical Associations and of the Chicago Ophthalmological and Otological Society. He was president of the Ramsey County Medical Society in 1901, and of the State Medical Association in 1908.

He died on December 29, 1918, at the age of seventy years.

Wm. Davis, M. D.
J. L. Rothrock, M. D.
J. W. Chamberlin, M. D.

The committee appointed in March to consider names for nomination from the state at large, presented a list of ten, and also a supplemental list of five. The report was referred to the Executive Committee.

Dr. A. W. Abbott reported a case of postrectal tumor (calcified fibroma) in a woman fifty-nine years of age. She had never been pregnant. There was no relevant family history. Four years ago she began to have bearing-down and pushing pains about the rectum when on her feet or riding, which were distinctly worse upon moving the bowels or in passing water. There was some extension of pain to the thighs, but no backache, and there was slight relief on lying down. Conditions grew so bad that she declared another month would see her insane if something was not done to give relief.

Physical examination showed all organs to be normal except a partial fixation of the ureter. Through the vagina a hard nodular mass could be felt behind the cervix, slightly movable, and very tender. In size it was about as large as a duck's egg. The rectum was movable over the tumor when palpated within that cavity.

Beginning at the outer edge of the anus an incision was made as high up as the tip of the coccyx, having in mind the possible necessity of doing a modified Kraske. This incision was extended through the raphe of the levator ani muscle, and the rectal wall was dissected free with the finger. A capsule could be made out, which was opened with scissors, and the tumor was coaxed forward until it could be grasped with forceps. Enucleation through the opening made in the levator ani muscle was easy. There was no hemorrhage; the rectal wall was uninjured. In gross appearance the tumor is that of a calcified fibromyoma. Microscopically it is made up of fine fibrils, wavy, and with small nuclei. Non-staining areas indicate the position of minute calcification. The arrangement of the fibrils leads to the belief that the tumor originally was a myoma. Such tumors are seldom seen, those springing from the surface of the bone being much rarer than those originating in the rectal wall. Textbooks in general refer to them only as being possible. Tuttle reports three; Berg, Senn, and Westermark report one each. Harrison Cripps mentions a similar case to Dr. Abbott's, and McCosh, in 1893, reported one identically like it. In dealing with it McCosh made a preliminary colostomy, and then did a modified Kraske, removing with the tumor a part of the gut wall as well.

If another case falls into his hands, Dr. Abbott says he will close the incision completely and not pack with gauze, as he did in this instance, feeling sure that recovery would be more rapid and less uncomfortable.

Dr. Staples reported the history of and exhibited a patient suffering from polycythemia, meaning, literally, many-celled blood. A male, aged 26, within the last year had developed muscular weakness, inability to work, headache, and general lassitude. The various nervous symptoms which frequently accompany this malady have not yet appeared. His blood examination showed red cells, 8,000,000 to 10,000,000; leucocytes, 8,000 to 9,000; hemoglobin, 136 to 150. Countenance presents a marked cyanosis; skin, purplish red; veins, distended and dark red. Clubbed fingers, especially marked and characteristic. Spleen slightly enlarged. Treatment, unsatisfactory. Bleeding was beneficial in one of his cases.

Dr. Farr gave a demonstration by means of motion pictures that illustrated his method of using novocain. A number of operations were shown performed under its influence.

The paper of the evening was presented by Dr. W. J. Mayo on "Splenic Anemia." Drs. Cross, Roberts, MacLaren, and Robertson participated in the discussion which followed, Dr. Mayo closing.

F. E. Leavitt, M.D.,
Secretary.

MISCELLANY

OUR ANIMAL FRIENDS

The United States Public Health Service submits the following list of "our animal friends," and wonders what we propose doing about it:

Anopheles mosquitoes, which carry malaria.

Aedes mosquitoes, which carry yellow fever.

Lice (with military training), which carry trench fever.

Lice (with or without military training), which carry typhus fever.

Flies, which carry typhoid fever, dysentery, and other diseases.

Fleas, which carry bubonic plague.

Tsetse flies, which carry African sleeping-sickness.

Hookworm, which is very much attached to man.

MALARIA

Estimates prepared by the United States Public Health Service indicate in the South the ravages of typhoid fever, tuberculosis, hookworm, and pellagra, all together are not as serious as those caused by malaria.

RADIUM PRODUCTION IN THE UNITED STATES

Mr. C. H. Viol, writing in *Science,* states that the total production of radium element in the United States down to 1919 is about 55 grams, which is probably more than half the total radium produced in the world. During the war, with no carnotite exports, the greatest part of the world's radium supply has been produced in this country. In 1918 the United States produced 13.6 grams. With regard to a discussion that has occurred concerning the amount of radium that can be produced from the carnotite fields, Mr. Viol says that the carnotite holdings of the Standard Chemical Company, which comprise about 350 claims and are the largest holdings under the control of a single concern, are estimated to be capable of yielding at least 500 grams of radium.

A GREAT HEALTH MOVEMENT

Paris.—Fifteen of America's leading health specialists, acting with the distinguished physicians and scientists of England, France, Japan, and Italy, have affixed their names to a resolution of great import to the future welfare of mankind just adopted by the Inter-Allied Red Cross Conference in session at Cannes, France. The resolution, telling of the purpose "to spread the light of science and the warmth of human sympathy into every corner of the world," was adopted by the committee of Red Cross leaders which is preparing the program for world betterment to be submitted to the congress of Red Cross societies at Geneva thirty days after peace has been declared. The text of the resolution follows:

"We are assembled at the invitation of the Committee of Red Cross Societies to assist in the task for which that committee was constituted, namely: 'To formulate and propose to the Red Cross Societies of the world an extended program of Red Cross activities in the interest of humanity.'

"In addressing ourselves to this task, we desire to express our belief that while every measure should be taken to repair the ravages of war and to prevent all wars, it is no less important that the world should address itself to the prevention and amelioration of those ever present tragedies of unnecessary sickness and death which occur in the homes of all peoples.

"This world-wide prevalence of disease and suffering is in considerable measure due to causes which science has not yet disclosed, but a great part of it is due to widespread ignorance and lack of application of well-established facts and methods capable either of largely restricting disease or of preventing it altogether.

"It is clear that it is most important to the future progress and security of civilization that intelligent steps be taken to instruct the peoples of the world in the observance of those principles and practices which will contribute to their health and welfare.

"In the accomplishment of these great aims it is of supreme consequence that the results of the studies and researches of science should be made available to the whole world; that high standards of practice and proficiency in the prevention of disease and preservation of health should be promoted and supported by an intelligent and educated public opinion; and that effective measures should be taken in every country to secure the utmost co-operation between the people at large and all well directed agencies engaged in the promotion of health.

"We have carefully considered the general purposes of the committee of Red Cross Societies whereby it is proposed to utilize a central organization which shall stimulate and co-ordinate the voluntary efforts of the peoples of the world through their respective Red Cross societies; which shall assist in promoting the development of sound measures for public health and sanitation, the welfare of children and mothers, the education and training of nurses, the control of tuberculosis, venereal diseases, malaria and other infectious and preventable diseases, and which shall endeavor to spread the light of science and the warmth of human sympathy into every corner of the world, and shall invoke in behalf of the broadest humanity not alone the results of science but the daily efforts of men and women of every country, every religion and every race.

"We believe that the plans now being developed should at the earliest practical moment be put into effect and placed at the disposal of the world. In no way can this be done so effectively as through the agency of the Red Cross, hitherto largely representing a movement for ameliorating the conditions of war but now surrounded by a new sentiment and the wide support and confidence of the peoples of the world and equipping it to promote effective measures for human betterment under conditions of peace.

"We are confident that this movement, assured as it is at the outset of the moral support of civilization, has in it great possibilities of adding immeasurably to the happiness and welfare of mankind."

The following are the American scientists who have subscribed their names to the resolution: Dr. William Welch, Dr. William Palmer Lucas, Lt.-Col. William F. Snow, Dr. Hugh S. Cumming, Dr. Samuel McClintock Hamill, Dr. Herman Michael Biggs, Dr. Fritz B. Talbot,

Colonel Richard P. Strong, Dr. L. Emmett Holt, Dr. Wycliffe Rose, Dr. Frederick F. Russell, Dr. Edward R. Baldwin, Dr. Livingston Farrand, Lt.-Col. Linsley R. Williams and Dr. Albert H. Garvin.

Scientists of the four other great powers who have signed the resolution are: Great Britain: Lt.-Col. Edward G. Hort, Lt.-Col. Sir R. W. Philip, Colonel S. L. Cummins, Dr. Henry Kenwood, Sir John Lumsden, Dr. F. Truby King, Colonel L. W. Harrison, Sir Arthur Newsholme, Dr. F. N. Cayay Menzies; Italy: Dr. Ettore Marcha Fava, Prof. Edcarde Maragliano, Dr. Bartholomeo Gosie, Lt.-Col. Aldo Castellani, Dr. Francesco Valagussa, Dr. Camille Golgi, Colonel Caesar Baduel, Dr. Camille Poli, Dr. Giuseppi Bastianelli; France: Dr. Paul Emile Roux, Dr. Edouard Rist, Dr. R. Armand DeLille; Japan: Dr. T. Kabeshima.

BOOK NOTICES

Pathological Technique. A practical Manual for workers in Pathologic Histology and Bacteriology. Including Directions for the performance of Autopsies and for Clinical Diagnosis by Laboratory Methods. By F. B. Mallory, M. D., Associate Professor of Pathology, Harvard Medical School; and J. B. Wright, M. D., Pathologist to the Massachusetts General Hospital. Seventh edition, revised and enlarged. Octavo of 555 pages with 181 illustrations. Philadelphia and London: W. B. Saunders Company, 1918. Cloth, $3.75. This book is so much used by pathologists as a handbook of technique that it requires no comment.

This new edition contains all the material of the old, somewhat better arranged. To this have been added many of the more valuable recent aids to laboratory diagnosis, such as the antiformin method for treating sputum, new stains for tissues and bacteria, and the technique of pneumococcus differentiation as abstracted from the Rockefeller monograph on the subject.

, , Smith, Margaret I.

Information for the Tuberculous. By F. W. Wittich, A. M., M. D. Instructor in Medicine and Physician in Charge of Tuberculosis Dispensary in the University of Minnesota Medical School; Visiting Physician to University Hospital, Minneapolis, Minn. C. V. Mosby Company, St. Louis, Mo.: 1918. Price, $1.00.

Dr. Wittich's book is written in very simple language, and is so arranged in chapters that information can be readily obtained on most of the subjects patients are apt to inquire about.

The nature of the tuberculous processes, especially the mode of spreading and of healing, is fully discussed, and is dealt with in such a way as to cause the patient to realize the importance of the measures used to combat the disease.

In the discussion of symptoms the patient is made to feel that each symptom points, more or less directly, towards activity or arrest of the disease; and it leaves the patient in an encouraged frame of mind, rather than a depressed one. The fundamental principles guiding the treatment of various symptoms are simply and nicely set forth.

The value of each of the factors involved in treatment is discussed more or less fully, and proper emphasis is placed on each.

In general, it may be said that the work should be of considerable value to the patient because of its simplicity of statement, its hopeful tone in discussing subjects, and completeness in covering the field.

The physician will find it helpful in his work because it is arranged so that the subject matter is presented in essentially the same manner in which patients are apt to inquire about symptoms, etc.

King, W. R.

NEWS ITEMS

The St. Paul City and County Hospital graduated a class of thirty nurses last month.

Dr. F. A. Allen, of Crosby, has purchased the practice of Dr. J. E. McCoy, of Ironton.

St. John's Hospital, of Red Wing, graduated three nurses from its training school last month.

Dr. William B. Rice, Jr., of Chicago, has been appointed superintendent of the Rood Hospital, of Chisholm.

Dr. O. E. Stewart, of Bricelyn, expects to be released from army service soon, and will locate at Albert Lea.

Dr. Frank A. Brewster, of Beaver City, Neb., is said to be the first physician to use an airplane to visit his patients.

At the May examinations of the Minnesota State Examining Board of Nurses, 158 certificates were granted.

Dr. Merton Field, who recently sold his practice at St. Peter, has offered to donate his private hospital to that city.

Dr. C. E. Stackhouse, of Bismarck, N. D., has been appointed assistant surgeon of the Northern Pacific Railway.

About one hundred subscribers to the stock of the Hutchinson Community Hospital, at Hutchinson, have been obtained.

Dr. W. C. Nickerson, of Mankato, has been appointed health officer of Fargo, N. D., at a salary of $250 a month.

Scotland, S. D., wants a hospital, and the architects plan for a building to cost $50,000 exclusive of furnishings.

Crookston has organized a Community Council, to look after health movements and the beautification of the city.

The contract for building the Tri-County Tuberculosis Sanatorium, near Ashland, Wis., was let last month for $80,000.

Dr. M. G. A. Milan has been appointed physician to the State Tuberculosis Sanatoriums at Crookston and Thief River Falls.

Every county in Minnesota will soon have an organized public-health association with a public-health nurse on full or part time.

Dr. C. A. Fjelstad, of Austin, will take a course of postgraduate work in the East, and upon its completion will locate in Minneapolis.

Work on the Mennonite Hospital building at Huron, S. D., has begun. A private residence has been purchased at a cost of $25,000.

Individual sanitary drinking-cups are to be provided on every railroad train in Minnesota as provided by a law recently enacted.

The complaints against Dr. P. C. Clark, head physician of the Soldiers' Home at Minnehaha, have been dismissed as without justification.

Dr. C. Stanley, of Winton, has moved to Fulda and become associated with Dr. F. T. Metcalf, who moved from Winton to Fulda in January.

Mr. F. H. Gambell, of Thief River Falls, is going to Russia for two years of Red Cross work. Dr. Gambell was tendered a farewell banquet last week.

Dr. Austin J. O'Leary, of Hibbing, has located in Eveleth, and will specialize in internal medicine. Dr. O'Leary has just returned from army service.

The Montana State Board of Health has issued an order that health officers, nurses, and school teachers must report all contagious diseases.

The Nopeming Tuberculosis Sanatorium graduated eight practical (one-year course) nurses last month. This is the fourth class graduated by the institution.

Dr. Mabel Ulrich, recently appointed a member of the new Minnesota Board of Public Welfare, has gone to Washington, D. C., to attend a public-welfare conference.

Dr. L. A. Barney, of Duluth, has been released from service in the army, and will take a six-months' postgraduate course in surgery in the East before resuming practice.

Dr. V. S. Ross, of Sioux Falls, S. D., has presented over one hundred volumes of scientific books to the medical department of the State University at Vermillion, S. D.

The Wilder Charities of St. Paul proposes to make a thorough health survey of St. Paul. Such work, done in the interests of public health, will have great value for the city and for medicine.

Mr. G. F. Schmidt, of Minneapolis, regimental surgeon in the 343d Field Artillery of the 90th Division, will soon be home. He has been in the service since August, 1917.

Dr. Gottlieb Oppliger, of New Ulm, whose disappearance was noted in these pages some time ago, has been found, and has been recommitted to the State Hospital at St. Peter.

Drs. Bolsta and Karn, of Ortonville, have donated their hospital and its equipment to the Dakota Evangelical Association, which operates the Bismarck (N. D.) Evangelical Hospital.

The surgeons of Sandstone have purchased a residence building and opened it as a hospital. The loss of the Moose Lake Hospital in the forest fires of last fall left the district without a hospital.

Dr. O. O. Larsen, of Detroit, is doing postgraduate work in Chicago. His practice at Detroit is in charge of Dr. L. H. Rutledge, of Minneapolis, who may become an associate of Dr. Larsen.

The mid-summer meeting of the Southern Minnesota Medical Association, to be held at Rochester, promises to be one of the best meetings in the history of the society. It will be largely attended.

The Aberdeen Clinic, which is now erecting a main clinic building at a cost of over $50,000, will soon begin the erection of a $125,000 building for convalescent patients and the friends and relatives of all patients.

Dr. W. W. Lewis, a specialist in diseases of the eye, ear, nose, and throat, in St. Paul, is home from army service. Dr. Lewis was formerly associated with Dr. F. E. Burch, St. Paul, who also recently returned from army work.

Dr. P. M. Hall, superintendent of the Minnesota Tuberculosis Sanatorium at Walker, is receiving high praise for his management of that institution from its patients, the staff, and the State Board of Control.

Dr. Andrew E. Johnson, of Cloquet, died on June 4 at the age of 58. Dr. Johnson was a graduate of the Medical School of the University of Minnesota, class of '91, and had practiced in Cloquet for twenty-eight years.

Davison County, S. D., of which Mitchell is the county seat, is the first county in the state to employ a county nurse under the provision of a

law recently passed in that state. She will examine all school children in Davison County.

The detention hospital at Watertown, S. D., is enjoying (?) *some* notoriety. The Registered Nurses' Association of the county has a signed article in a Watertown paper on the subject, and it is drastic. If true, it is to be commended.

Dr. F. E. Burch, of St. Paul, who was major at the Camp Dodge base hospital, has resumed his practice. He speaks highly of the work of Northwestern surgeons in this hospital, which cared for 50,000 patients in less than two years.

"Senate Bill 140" promises to become memorable in North Dakota. It requires that physicians report all cases of venereal diseases known to them or coming to their attention hereafter, reports to be made to state, county, or municipal health authorities.

Dr. J. M. A. Gravelle, of St. Paul, shot his wife dead on June 7, and attempted suicide. It is clear that the deed was committed by the physician while temporarily insane. Dr. Gravelle was in the Medical Corps until a few weeks ago. He held the rank of captain.

Dr. F. A. Spafford, of Flandreau, S. D., the new secretary of the South Dakota State Medical Association, was re-appointed last month a member of the South Dakota Board of Regents. Dr. Spafford is a classical student and an advocate of the classics in high school and college, but in no sense an opponent of vocational teaching.

The newspapers of Minnesota and, to some extent, of the entire Northwest, indicate that three subjects fill a large place today in public interest: public-health nurses, baby clinics, and tuberculosis clinics. Other forms of public-health measures are frequently mentioned, but the three named are foremost in public thought.

The thirty-second annual convention of the American Association of Orificial surgeons will be held September 15-16-17 at the Congress Hotel, Chicago. The forenoons will be given to operative demonstrations at the hospital. The program will include practical addresses, essays and papers by prominent orificialists. The clinics will be interesting.

The following medical students at the University of Minnesota have been elected to Alpha Omega Alpha, the honorary medical scholarship fraternity, from the senior medical class: Wendell L. Downing, Swan Ericson, Manley H. Haynes, Siegfried F. Herrman, Hugh T. Jones, Thomas J. Kinsella, Russell W. Morse, Martin D. Ott, Faus P. Silvernale, Edgar H. Norris, Wm. Ray Shannon. The following physicians have been elected to honorary membership during the past year: Dr. Charles Lyman Greene, Dr. J. C. Litzenberg, and Dr. J. P. Sedgwick.

The program of the annual meeting of the North Dakota Association is printed on another page, and shows excellent work by the program committee. Every title shows the practical character of the papers to be presented, and, no doubt, every paper will be well worth hearing. The entertainments promise pleasure to the visitors to Grand Forks.

Dr. W. A. Fansler, of Minneapolis, who has been instructor in surgery in the University Medical School and in charge of the department of proctology in the out-patient department of the University Dispensary, and also associated with Dr. F. A. Dunsmoor for the past four years, is now located in the La Salle building. He will confine his work exclusively to proctology.

"Postgraduate" work for nurses will be offered by the Minnesota Public Health Association from June 24 to July 11. Graduate and registered nurses who have had three months' experience in public-health work may take the course. Miss Bessie A. Haasis, of the national association for public-health nursing, will speak at the course. It is planned for a conference on public-health nursing.

Dr. John H. Bowman, director of the American College of Surgeons, addressed a joint meeting of the Civic and Commerce Association and Hennepin County Medical Society in Minneapolis on June 4th, and he also spoke before the Minnesota Hospital Association on the same day. Dr. Bowman speaks on the American hospital, asking "Is it Modern?" The College of Surgeons proposes, as Dr. Bowman points out, to make it so by publicity. Dr. Bowman is accompanied in his tour by Rev. Father Charles D. Monlinier, of Marquette University. A summary of his address made by himself will appear in our next issue.

The Minnesota Hospital Association held its second annual conference in Minneapolis on June 4 and 5, at the Radisson Hotel. The attendance was good, and the interest in the work of the Association was clearly manifest. The membership almost doubled during the past year. Several speakers outside of the membership addressed the meeting. Officers for the cur-

rent year were elected as follows: President, Dr. L. B. Baldwin, superintendent of the University Hospital; first vice-president, Dr. P. M. Hall, superintendent of the State Tuberculosis Sanatorium, Walker; second vice-president, Mrs. S. H. Knight, superintendent of Asbury Hospital, Minneapolis; third vice-president, Miss Naomi Johnson, superintendent of the Red Wing City Hospital, Red Wing; secretary and treasurer, J. E. Haugen, superintendent of the St. Paul Hospital. The next meeting will be held in Duluth in June, 1920.

PROGRAM OF THE
THIRTY-SECOND ANNUAL MEETING
OF THE

NORTH DAKOTA STATE MEDICAL ASSOCIATION

Monday, Tuesday, and Wednesday
June 23-25
1919

GRAND FORKS, NORTH DAKOTA

MONDAY EVENING

Meeting of the House of Delegates, 8:00 P. M., Commercial Club Rooms.

TUESDAY MORNING, 9:30 A. M.

Invocation—Rev. H. B. Thorgrimson, Grand Forks.

Address of Welcome—Dr. H. M. Wheeler, Grand Forks.

Response—Dr. J. P. Aylen, Fargo.

President's address—Dr. E. A. Pray, Valley City.

PAPERS

"Melanotic Carcinoma—Report of Case With Specimen"—Dr. W. F. Sihler, Devils Lake.

Discussion opened by Dr. A. G. Long, Public Health Laboratory, University.

"Infant Feeding"—Dr. F. C. Rodda, Minneapolis, Minn.

TUESDAY AFTERNOON, 2:00 P. M.

"Prostatectomy: A Study of Thirty-five Cases From the Standpoint of Morbidity and Mortality"—Dr. V. J. LaRose, Bismarck.

Discussion opened by Dr. J. E. Engstad, Grand Forks.

"The Use and the Misuse of the Forceps in Labor"—Dr. O. Bjornson, Winnipeg, Canada.

Discussion opened by Dr. J. D. Taylor and Dr. H. G. Woutat, Grand Forks.

"Medical Examination of Soldiers About to Be Discharged From the Army"—Dr. Martin P. Rindlaub, Fargo.

"Peripheral Nerve Surgery"—Dr. A. F. Bratrud, Grand Forks.

Discussion opened by Dr. W. H. Witherstine, Grand Forks.

'Demonstration of Artificial Pneumothorax"—Dr. J. G. Lamont, Dunseith.

Garden party, 5:00 P. M., Lincoln Park.

Organ recital at 7:45 P. M., Presbyterian church, by Prof. Paolo Conte of Wesley College, Grand Forks.

Address, "Some Lessons From the Late War"—Dr. W. A. Evans, Chicago, 8:00 P. M., Presbyterian church.

Banquet, 10:00 P. M., Dacotah Hotel.

WEDNESDAY MORNING, 9:30 A. M.

"Some Effects Produced by the Grippe"—Dr. W. A. Evans, Chicago.

Discussion opened by Dr. F. W. MacManus, Williston.

"The Interpretation of Joint Conditions With Special Reference to Those of the Knee-Joint"—Dr. C. N. Callander, Fargo.

Discussion opened by Dr. H. H. Healy, Grand Forks.

"Inguinal Hernia"—Dr. E. P. Quain, Bismarck.

Discussion opened by Dr. R. D. Campbell, Grand Forks.

WEDNESDAY AFTERNOON, 2:00 P. M.

"Post-operative Care of the Infected Abdomen"—Dr. Fred Ewing, Kenmare.

Discussion opened by Dr. H. M. Waldren, Drayton.

"Some Notes on the Pathology and Treatment of Gonorrhea"—Dr. H. E. Michelson, Minneapolis, Minn.

"The Control of Venereal Diseases as a Public Health Measure"—Dr. F. R. Smyth, Bismarck.

"The Differential Diagnosis Between Trachoma and Follicular Conjunctivitis"—Dr. G. Golseth, Jamestown.

Discussion opened by Dr. G. F. Drew, Devils Lake.

PRACTICE FOR SALE

Combined surgical and general practice in good southern Minnesota town of 3,000, excellent hospital, $12,000 business. Combination house and office to sell, thoroughly modern. Good reason for selling out. Address 237, care of this office.

EXCELLENT LOCATION FOR PHYSICIAN

Excellent location for a physician in northwestern part of Minnesota, with large territory. Give particulars as to years of experience, age, single or married, and early availability in first letter. Fine office rooms to be had. Address 255, care of this office.

PHYSICIAN WANTED

The village of Rushmore, Minn., wants a physician to locate there. The country is rich, and a good man will be given loyal support. This is an excellent opening. For particulars, address Mr. W. C. Thom, care of the First National Bank, Rushmore, Minn.

DESIRES A MONTH'S WORK WITH A SURGEON

A man doing general work in a small town, for a little postgraduate work this summer, desires to donate his time for about a month to a good general surgeon, or to a good eye, ear, nose, and throat man. Am able to do refraction. Address 249, care of this office.

PRACTICE WANTED

A general practice in a town of 1,000 or more in Minnesota. Graduated in 1911, and in addition to general practice have had one and a half years' army service. Do not object to partnership. Will consider purchase of real estate or office equipment. Address 252, care of this office.

POSITION AS LABORATORY TECHNICIAN WANTED

By a young woman, in a hospital or with a group of doctors, preferably in the Twin Cities. Routine laboratory work; experienced in tissue work; have assisted in making Wassermans; best of references. Address 254, care of this office.

POSITION AS LABORATORY TECHNICIAN WANTED

By a graduate of the University of Minnesota, who is prepared to do blood chemistry, urinalysis, bacteriological work (Wassermanns, if necessary), and all routine experiments with the exception of tissue work. Address 253, care of this office.

WANTED—AN INTERNIST AND A RÖNTGENOLOGIST FOR GROUP PRACTICE.

A Internist who has had good training and experience to head the department of medicine for group practice; and also a Röntgenologist who is similarly qualified for the *X*-ray department of such group. In a city of 15,000. Address, 243, care of this office.

LABORATORY TECHNICIAN AND *X*-RAY OPERAOR WANTED

A firm of surgeons in one of the large cities of South Dakota wants a technician who can do all kinds of laboratory work, including Wassermanns, etc., and *x*-ray work. State what experience you have had, and also salary desired. Address 235, care of this office.

PRACTICE FOR SALE

Minnesota $5,000 practice for sale, with only distant competition, still thickly settled, good roads and about 99 per cent collectible. All doctors that have been located here made money from the start. No real estate; only drugs, instruments and office fixtures. Takes at least $2,000 to swing the deal. Address 250, care of this office.

ASSISTANT WANTED FOR EYE, EAR, NOSE AND THROAT WORK

Assistant in a large eye, ear, nose, and throat practice. Must be young, a good worker, and have experience in eye and ear work. Partnership later to right man. Give complete information concerning qualifications, languages spoken, etc., in first letter. Address 246, care of this office.

WANTED—SALARIED POSITION WITH PARTNERSHIP IN VIEW

By a married man, 36 years of age; graduate of the University of Michigan (1907); ten years' general experience; one and a half years in Army Service. Prefer town with hospital facilities. Licensed in Minnesota and North Dakota. Will do locum tenens work for three or four months. Address 241, care of this office.

PHYSICIANS' PRESCRIPTION BOTTLES FOR SALE

French square 8-ounce bottles, packed in 1½-gross cases, at $4.50 per gross or $6.75 per case. In 5-case lots, $4.25 per gross, in 10-case lots, $4.00 per gross. We also have a few gross each of 2-, 3-, 4-, 8-, and 16-ounce round and square prescriptions. Prices quoted on any size or quantity wanted. Address Wm. Painter Company, 1417 Washington Ave. S., Minneapolis.

PRACTICE FOR SALE

South Dakota practice, in southeastern part of state, practice running $8,000 to $10,000 a year. To purchaser of modern office equipment and office-residence located on three lots and including barn and garage. Beautiful improved country, fine people, collections excellent. Sacrifice price $7,000 with payment of $2,000 down and good time. Equipment includes *x*-ray and good supply of drugs. Don't write unless you have the money and want a good location. Reason for leaving, condition of health. Address 238, care of this office.

Equal in Calories

The 30-cent package of Quaker Oats yields 6221 calories. It is equal on this basis to 80 bananas.

It Equals in Calories

50 Potatoes	**22 Lbs. Perch**
21 Cans Peas	**9 Lbs. Veal**
750 Oysters	**89 Eggs**

Meat and fish foods, on the average, cost over ten times Quaker Oats for the same energy value.

The oat is also a vastly better food. It is almost the ideal food in balance and completeness. It is whole-grain food.

There are many reasons, we suggest, why everyone should know this.

Quaker Oats

Flaked from Queen Grains Only

Quaker Oats is flaked from queen grains only—just the rich, plump, flavory oats. We get but ten pounds from a bushel. It means an extra-flavory oat dish without extra price.

The Quaker Oats Company

Chicago

(3074)

PUBLISHER'S DEPARTMENT

A BIG STRIDE IN PLANT-THERAPY

The progressive and broad-minded physician who has watched the dawning of the new era when plant-therapy would come into its own, must feel greatly cheered and comforted by the rapidly growing success of Proteogens, non-specific plant proteins for intramuscular administration, now in general use in all parts of the country. It is remarkable how a radical theory, such as that of Dr. Horovitz, was admitted to be, could so completely and promptly win the favor and acceptance of the ultra-ethical and the "conscientious objectors" who usually antagonize such innovations. There seems to be but one rational explanation, involving two essential factors,—the broad, open-mindedness of the medical fraternity and a convincing proof that the theory was correct. Clinical experience has established the proof of merit in Proteogens, and the profession has accepted it, which in the final reckoning has caused the advocates of plant-therapy to cheerfully realize that a real victory has been won.

SALINOS

Salinos is a simple saline cathartic with certain characteristics that commend it above the crude drugs that are often prescribed. It is palatable, and thus pleases the patient who has to resort often to cathartics, as

very many do. It is readily soluble in cold water, which makes its use convenient under all circumstances. It is a mild eliminative that makes its frequent use unobjectionable. And it is inexpensive.

Samples will be cheerfully sent, postpaid, to any physicians desiring to give it a trial. Address a card to Leo Shapiro Company, Minneapolis.

THOROUGH DISINFECTION

Daily disinfection of the private residence, as well as of the private and public hospital, makes for family and community health.

A good disinfectant, one that is effective and also odorless, is to be recommended by physicians. Such an one is Platt's Chlorides, manufactured by Henry B. Platt Co., New York.

HAYDEN'S VIBURNUM COMPOUND

Viburnum is one old remedy whose efficacy as a curative agent has never been questioned especially in uterine diseases. Hayden's Viburnum Compound has so long been used where viburnum is indicated that it is now very generally prescribed for its recognized efficiency in most of the uterine troubles treated medically.

It is manufactured by the New York Pharmaceutical Company.

KELENE

Kelene is a pure chloride of ethyl, and its use for local and general anesthesia has demonstrated it to be an anesthetic of very superior quality. The fact that it is distributed exclusively by Merck & Co. is ample guarantee of its excellence. Surgeons and general practitioners who have used Kelene for many years say it has a marked superiority to most, if not all, anesthetics.

Literature will be sent upon request by Merck & Co. of New York or St. Louis.

REMOVAL NOTICE

The Wm. Meyer Co. of Chicago, manufacturers of the Meyer Universal Klinoscope, have moved from Washington Boulevard to 1644-1648 North Girard Street, near North Avenue, where they occupy their own new building with ample space to permit their work being done in the best possible way.

The Meyer Klinoscope is a combination instrument for *x*-ray work that is of great merit.

LISTERINE

As a vehicle or basic ingredient of physicians' prescriptions, Listerine is unexcelled, and is in well-nigh universal use among physicians. As a non-poisoning and non-irritating antiseptic solution, put up in an exceedingly pleasant form, it is also in well-nigh universal use among laymen.

Listerine is a saturated solution of boric acid, and has become popular on its merits alone.

It is put up by the Lambert Pharmacal Company of St. Louis, Mo., who will send any physician a bottle free for observation.

HORMOTONE

The G. W. Carnrick Company, of New York, is a well-known pharmaceutical house that has long maintained the absolute confidence of medical men. Their claims for their latest product, "Hormotone," may be depended upon as not in the least exaggerated.

Hormotone is especially useful as a tonic in menstrual and menopausal disorders which so often baffle the general practitioner, as well as the neurologist, into whose hands these cases often come.

Such a preparation is very valuable in conditions so difficult to deal with.

MELLIN'S FOOD

Mellin's Food is probably recommended as a substitute for mother's milk, when necessity demands, by more pediatrists than any other prepared food, and this is because both scientific and practical men have studied the conditions which call for a substitute food. Mellin's Food demonstrates its scientific composition especially in its use in the summer time when diarrheas prevail to an unusual degree. Physicians with obstinate cases of this kind will do well to give this food a thorough trial, and all who do will surely be gratified with the results.

BENETOL

A disinfectant of high germicidal power and non-poisonous is found in Benetol, with all of the good and none of the bad qualities of carbolic acid. It is used, in weak solution, for bathing the sick, for bedsores, for a mouth-wash, and, indeed, for all sanitary purposes.

It is an unexcelled disinfectant for both the surgeon and the physician, and for the hospital and the home.

Samples of Benetol with descriptive matter will be sent free to any physician who desires it. Address The Benetol Company, Minneapolis.

REST HOSPITAL, MINNEAPOLIS

Rest Hospital is a home hospital, located in a beautiful part of a fine residence district of Minneapolis, and conducted by a woman who understands the needs and the care of the sick and the invalid, Miss Delia O'Connell, R. N. There is no better hospital of its type in the city, as is evidenced by the high professional character of the physicians who have kept rooms full with their own patients.

Such hospitals deserve the highest commendation.

For any desired information, address, Miss Delia O'Connell, Superintendent, 2527 Second Ave. So., Minneapolis.

THROMBOPLASTIN SOLUTION

The doctor should always have an hemostatic in his case. There is liable to be need for it any minute. Thromboplastin Solution (Armour) is a specific hemostatic and acts promptly.

Thromboplastin (Armour) is made from the fresh brain of kosher killed cattle. There is a certain amount of that blood clotting thing in an animal's brain and this is not used up when the animal's throat is cut. It is used up when an animal is killed with a hammer. In the Armour Laboratory kosher killed cattle brain is used in making Thromboplastin. That's why Thromboplastin Solution (Armour) works promptly.

LAVORIS

Lavoris is a zinc chloride antiseptic that has made its way with the profession without one exaggerated claim for it. Its excellence as a mouth-wash, for

which purpose it was originally put up, at once suggested its value for all mucous membranes; and thus, without a "bush," it has become as famous as good wine.

The pharmaceutical value of its principal ingredient is known to every physician, and its merits as a preparation at once become known to every physician who uses it once. Ask the Lavoris Chemical Co. of Minneapolis for a trial bottle.

STILL ROCK SPA

There are in this country only a few ethical sanatoriums for the exclusive treatment of diabetes and Bright's disease, and among the foremost of these is Still Rock Spa at Waukesha, Wis., a 100-bed hospital under the medical directorship of Dr. A. J. Hodgson.

The results obtained in cases of these two serious diseases have been very gratifying, and are due, not to any specific treatment or therapy, but to the good judgment exhibited in the handling of each individual patient under conditions most conducive to the building up of the patient.

The sanatorium treatment in these diseases, as in tuberculosis, is well-nigh imperative, at least in the large percentage of cases.

LAXATIVES AND THE PHYSICIAN

When you prescribe a saline laxative you expect to remove as quickly as possible from the gastro-intestinal tract the retained products of food ingestion and other toxic substances which are harmful to the patient.

The laxative should be prompt and efficient in its action—thoroughly evacuating the colon, if possible, without griping or discomfort.

For such a laxative we recommend Pluto Water. It stimulates intestinal secretion and movement and with varying dosage acts as a mild aperient or a free cathartic.

The French Lick Springs Hotel Company at French Lick, Indiana, will be pleased to forward sample bottles at no expense to the medical profession—who are under no obligations whatsoever.

TWO DOCTORS WHO TALKED IN SHOP

One asked the other his opinion of Alkalol. The other said he had never used it—if he wanted a normal salt solution he could make it himself or have his druggist make it for him. The other doctor looked at him in surprise. But, Alkalol is not a normal salt solution, he said. In the first place Alkalol is not isotonic as a normal salt solution is, but hypotonic, that is to say, its specific gravity is less than that of the blood. Its alkalinity and salinity are properly balanced. Its contents adjust those salts that are needed by the tissue cells, especially mucous membrane cells, consequently, when you use Alkalol, you get an effect entirely different from what you get from an unbalanced alkaline solution or an acid solution, or even a normal salt solution. Alkalol is not a mere cleanser. It reverses the osmotic current, from without into the cell, instead of from the cell outward. It feeds the cells because it passes salts into them which they need. It overcomes congestion, and helps to restore vascular tone. It makes no difference where you use it, whether in the eye or in the ear, or in the nose and throat, on the skin or injected into the bladder, urethra or rectum on the tampon, you will find Alkalol action is what you have been looking for. I use it. I would not be without it. Verbum sap.

THE MUDLAVIA TREATMENT

Mudlavia, Indiana, has become famous for two reasons: (1) because of the excellence of the Mudlavia treatment; and (2) because the treatment has not been exploited after the manner of the quack. It is specifically indicated in most cases of chronic rheumatism, gout, arthritis deformans, and neuritis, a very tough bunch of diseases to deal with. Such cases are solicited only from physicians and are treated, preferably, under the supervision of the family physician of each. In this way the family physician can mark the progress of the case, and estimate the results.

The "Mudlavia Blue Book for Physicians" is sent gratuitously to physicians, and the manager of Mudlavia invites inspection of their work and correspondence with medical men.

Mr. W. C. Kramer, the general manager of Mudlavia, will answer any questions asked or will give any information desired.

MINNEAPOLIS CLINICAL LABORATORY

A very modest announcement of the Minneapolis Clinical Laboratory has appeared regularly in our advertising columns for several years, and this is proper. As a matter of fact, Dr. Henry L. Ulrich, the director of the laboratory, is almost a pioneer and, in many respects, is a leader in this work. He combines the ability of a laboratory technician with the skill and ability of a diagnostician, and he now devotes himself to internal medicine, largely as a consultant, in addition to the directorship of his laboratory.

Dr. Ulrich gives special attention to autovaccines, and the medical literature of the Northwest testifies to his successful work in this line. Many of the case-histories of patients treated with autovaccines made by Dr. Ulrich, as found in the literature, are exceedingly interesting.

Both city and country physicians need such assistance as Dr. Ulrich can give.

ANASARCIN

A busy and successful doctor once remarked that he never appreciated what an important symptom dropsy was to the patient until he had it himself. He went on to describe his experience, and said that in his own case he had done what heretofore he had hesitated to do for his patients. He sent for the samples of Anasarcin Tablets, and followed directions as to their administration. He got rid of his dropsy. He also began to use Anasarcin Tablets in his practice. He declares that he could not, or would not, get along without them.

It does not always require personal experience with a remedy to appreciate its value.

There are several scientific reasons why the combination of therapeutic agents in Anasarcin Tablets remove dropsy in a rational and effective way.

Interesting literature regarding the action of Anasarcin and samples may be obtained by writing to the Anasarcin Chemical Co., Winchester, Tenn.

THE
JOURNAL-LANCET

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SYMPOSIUM ON SYPHILIS*

H. G. IRVINE, M. D.; E. T. BELL, M. D.; JOHN BUTLER, M. D.; J. P. SCHNEIDER, M. D.; F. R. WRIGHT, M. D.; W. A. JONES, M. D.; AND A. W. MORRISON, M. D.

SYPHILIS FROM A PUBLIC HEALTH STANDPOINT

BY H. G. IRVINE, M.D.,
Assistant Professor of Dermatology and Syphilology, University of Minnesota Medical School, and Director of the Division of Venereal Diseases of the Minnesota State Board of Health
MINNEAPOLIS

The problem of syphilis may be divided into two general parts: first, prevention of infection; and, second, diagnosis, treatment, and control of those already infected. To attack the problem on the preventive side every effort must be made to prevent exposure.

The United States Public Health Service recognizes every illicit intercourse as a possible exposure to venereal disease; therefore all successful efforts which are made to suppress prostitution may be regarded as directly reducing the number of exposures. That the Army and the Public Health Service were warranted in their stand on this question as a public health measure has been proven by the lessening of the number of exposures and the amount of disease immediately. Open houses of prostitution in proximity to camps have been closed. The education of the general public to the amount and seriousness of syphilis may also be of some benefit in preventing exposures. Indirectly, better recreational facilities, prohibition, better working conditions, and adequate institutional care for the feeble-minded also play a considerable part on the preventive side. Exposure having taken place, there still remains artificial or medical prophylaxis as a preventive measure. With men under control, as in the Army and Navy, there can be no question of the value of this work. Whether it can be successfully used among civilians is another question. Public opinion may support it, and public opinion may say that it is simply an effort at making vice safe, and have none of it. If it is regarded entirely as a matter of early treatment and carried on at dispensaries with all patients properly registered and followed up, there can be little honest criticism; and, if the public can be educated to make proper use of these facilities, undoubtedly many cases will be prevented.

The first need in attacking the second part of the problem is a system of reporting. It is quite obvious that we must know where cases are to see that they are successfully treated and controlled. On account of the nature of the disease, these reports must of course be confidential. To this end the physician may report his cases by serial number, the Board of Health reserving the right to require name and address if it is found that the patient is exposing others, and thus becoming a menace to public health. In actively

*Presented at the second annual meeting of Minneapolis Clinic Week on the afternoon of May 8, 1919.

co-operating with reporting, the physician may do a great deal in the public health campaign. First, his work will make it possible for the first time to secure valuable statistics; second, by securing information from his patient as to the source of infection, he makes it possible for the health authorities to apprehend and control the carrier. Another point in connection with the report system is very valuable to the physician. By keeping track and reporting his delinquent patients, the Board of Health, through its social-service department, can be of material assistance in keeping his patients under treatment.

Realizing that many patients come to grief through attempted self-medication made possible by the sale of fake venereal disease remedies, the Board of Health has prohibited the sale of all such remedies, except upon the prescription of a licensed physician. Through its publicity and educational work, a good deal has also been accomplished toward putting the quack and fake medical institute out of business.

In order that all patients may secure adequate treatment it must be made easy for patients to come to treatment. This means additional dispensary and hospital facilities. The evening dispensary is particularly desirable in that it makes it possible for the working person to secure his treatment without loss of time. Through these clinics and the State's free arsphenamine, many persons are now receiving a sufficient amount of treatment where formerly they secured only what they could afford to pay for, and when relapses took place, as they surely did, that person became at once a source of danger to the public. Through the quarantine regulations, the Board of Health is able to control many carriers, such as prostitutes and incorrigible or ignorant patients.

As a further aid to diagnosis and treatment the profession is offered free laboratory service for Wassermann tests. It is hoped that shortly free examinations for the spirochete may also be available, thus furnishing a further assistance to the physician in early diagnosis.

Pamphlets of information for patients and others are being distributed in large numbers. Pamphlets on the treatment of syphilis are available to all physicians.

It is not within the scope of so brief a paper as this to give details of what has been done or what is being done. An attempt has been made to suggest the general points to be considered from a public health standpoint. As the official agency carrying on the public health side, it can be seen that much assistance can be given the physician by the Board of Health if he avails himself of it,—assistance in making his diagnosis, information in regard to treatment in individual cases, free arsphenamine for his patients who cannot afford to pay, transferring of patients from quacks and drug-stores, social service for returning and retaining delinquent patients, and an opportunity through its clinics for any physician to see hundreds of cases treated in the most modern way.

In return for this service the profession is asked promptly to report all cases, and to co-operate in controlling patients who expose others. In this public health work the physician has a civic duty to perform, one which he owes his community. The records of our army are an indication of the possibilities, but these possibilities depend absolutely upon activities and co-operation of the medical profession.

PATHOLOGY OF SYPHILIS

By E. T. Bell, M.D.
MINNEAPOLIS

Since the discovery of the treponema, pathologists have been able to make much more accurate studies of syphilis, and it has gradually been learned that the necrotic type of lesion (the gumma) is a comparatively infrequent form of anatomical manifestation of syphilis. Infiltration with lymphocytes and connective-tissue hyperplasia with destruction of the more highly specialized tissue cells are the usual result of syphilitic infection. This is especially true in congenital syphilis and in syphilis of the vascular system.

SYPHILIS OF THE VASCULAR SYSTEM

(a) *The heart.*—Syphilitic myocarditis is probably much commoner than has generally been supposed. The recent studies by Warthin have shown the surprising frequency of this condition. This investigator believes it to be the usual cause of death in old syphilitics. It is characterized by whitish patches in the heart mus-

cle, which are composed of small lymphocytes and connective tissue, the muscle fibers having disappeared. Warthin has demonstrated treponemata in these areas. When the inflammatory area has become converted into scar tissue the organisms are no longer demonstrable. If Warthin's observations are confirmed we must interpret as luetic many cases of myocardial fibrosis now classified as due to coronary sclerosis.

(b) *The aorta.*—Luetic aortitis is the most frequent pathologic finding in acquired syphilis. It differs from simple arteriosclerosis in the absence of fat and calcium deposits and in the thickening of the vessel wall it produces. The lesion usually begins in the arch of the aorta and stops abruptly in the abdominal aorta. Microscopically, there is extensive infiltration of the adventitia and outer media with lymphocytes. The destruction of this part of the wall of the aorta is the cause of the frequent development of aneurysms in this disease. Nearly all aneurysms of the arch and thoracic aorta are luetic in origin. Simple arteriosclerosis seldom causes such weakening of the wall of the vessel because it is usually limited to the intima. Treponema have been demonstrated in luetic aortitis, but they are difficult to find. Gummata of the heart are rare as compared with the proliferative and exudative changes, and gummata of the aorta are very rare.

Syphilitic involvement of the arteries of the brain is fairly well known. It causes occlusion of the vessels with infarction of areas of the brain. Syphilitic disease of other arteries is not well understood.

CONGENITAL SYPHILIS

Infection of the mother before conception or during pregnancy usually causes infection of the fetus. The treponemata enter the circulation of the fetus through the placenta. Often no gross lesions of the placenta are present. Colles' law (the mother of a syphilitic child is immune) and Profeta's law (the child of syphilitic parents is immune) have both been discarded. The Wassermann test has shown that many of these cases of supposed immunity are merely recessive syphilis, and careful histologic examination of the tissues has demonstrated the presence of syphilis in others, even when the Wassermann reaction fails to disclose it. Clinical experience has also shown that a supposedly non-syphilitic mother gives birth to more syphilitic children at successive pregnancies.

THREE TYPES OF CONGENITAL SYPHILIS

(a) *Fetal syphilis.*—The infected fetus dies at some time during the latter half of pregnancy, and is often macerated before it is born. Syphilis is not a common cause of abortion (death during the early months of pregnancy). Osteochondritis syphilitica is usually present. There is enlargement of the spleen in most cases. There are enormous numbers of treponemata in all the organs. Pemphigus is often present. There is some interstitial inflammation in the liver, pancreas, testes, lungs, and heart. Gummata are uncommon. Usually, microscopic examination is required to establish the diagnosis.

(b) *Congenital syphilis* (early type).—The symptoms usually begin during the first month. There are ulcerating lesions of the mucosa of the nose, which subsequently cause necrosis of the bone with resulting deformity of the nose. This gives rise in early stages to the condition called "snuffles." The soles of the feet have a characteristic smooth, shiny appearance. There may be papulous or pemphigus-like exanthemata of the skin. The spleen is often enlarged. Osteochondritis syphilitica usually disappears after the first month. Hyperplastic periostitis may appear on the epiphysis of the long bones, or less frequently on the bones of the skull. Gummata or diffuse infiltrations in the liver may obstruct the bile-ducts, causing jaundice. Later during the nursing period involvement of the arteries of the brain may cause encephalomalacia. Some of these cases improve even without treatment, only to recur later with the usual appearances of acquired syphilis.

(c) *Congenital syphilis* (late type).—The first symptoms appear after the nursing period. The sense organs are often involved: keratitis, chorioretinitis, optic neuritis, auditory neuritis (deafness not preceded by discharge from ear). The bones show diffuse or circumscribed periostitis. There may be synovitis with serous exudate, especially in the knee-joints. Serpiginous syphilides occur on the skin, and there are ulcers on the mucous membranes combined with gummata of the hard palate and nose. Deformities of the teeth occur (Hutchinson teeth). Subsequently involvement of the nervous system may give rise to psychoses, tabes, progressive paralysis, etc. There may be imperfect development of the entire body (dwarfing) or delayed sexual development.

Death often results from intercurrent infections.

THE IMPORTANCE OF EARLY DIAGNOSIS AND TREATMENT OF SYPHILIS

By John Butler, M. D.
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The possibility of curing many cases of primary syphilis through early diagnosis and immediate intensive treatment has become a matter of persuasive interest to the physician of today. The disadvantage of late diagnosis and treatment in hoping for an abortive cure after the eruptive stage of the disease is established, is apparent to all who appreciate its pathology and chronicity when the disease has reached the secondary stage.

An early diagnosis of primary syphilis depends on the demonstration of the spirochete pallida in the chancre before the parasites have been sufficiently distributed and localized in the denser tissues throughout the body to produce profound pathological changes in them. In the early primary stages of the disease (up to four weeks after the infection or one week after the development of the chancre) a clinical diagnosis is often impossible, and most always uncertain. The Wassermann test is of no value as a diagnostic aid in this stage of the disease, as it is usually negative.

We read in many of our modern text-books dealing with syphilis that the primary lesion presents a fairly definite clinical appearance, the induration of the sore receiving special consideration in formulating a positive diagnosis. As a matter of fact we have clinical varieties of the chancre that show no appreciable induration on the most careful examination. The chancre, like all other manifestations of syphilis, varies in appearance according to the structure of the tissue in which it is situated.

Immediate diagnosis may be made of the suspected primary lesion by careful microscopic examination of the serum expressed from it, providing the sore is of not more than two months duration and antiseptics, especially mercury, silver nitrate, and iodine have not been applied beforehand.

To obtain the serum, the sore should first be thoroughly cleansed with a piece of gauze soaked with physiological saline. This procedure removes all saprophytic organisms, as S. refringens, and the irritation produced incident to the cleansing causes the serum containing the spirochetes to ooze to the surface.

If the chancre is healed, two drops of a physiological saline may be injected into its base through a fine hypodermic needle, macerating the tissue by rotating the needle, and aspirating two minutes later a drop or two of saline mixed with serum, which may be collected on a slide and examined for spirochetes. The same procedure may be used for recovering the spirochetes from the enlarged inguinal lymph-nodes.

There are three methods of spirochete demonstration: staining, India ink, and dark-field illumination. Staining methods for demonstrating the spirochete pallida have been practically discarded. The objection to this method being—

1. The parasite has a feeble affinity for basic dyes.
2. The long time required for staining it.
3. The organisms are often distorted, therefore unrecognizable as the spirochete pallida.
4. Albuminous material or fibrin spirals may be confused with the pallida.
5. A very thin film is necessary.

The India-ink method utilizes the fact that spirochetes suspended in India ink, when the latter is spread out in a thin film, show up as a clear space against a dark background. Thus the spirochete pallida appears as a white undulating thread, while the film of ink appears yellow or black, according to its thickness.

The objection to this method is that the width of the spirochete pallida varies with the thickness of the films; that in a thick film the spirochetes appear thin; that in a thin film the spirochetes appear thick; that the organism shows great distortion and its undulations are irregular and uneven; and that the important differential sign, motility, is wanting.

DARK-FIELD METHOD

A drop of the serum is touched to a coverglass and immediately pressed firmly on a slide. It is important to see that no air bubbles are included in the film, as they diffuse light. In order to prevent a total reflection of the oblique rays falling on the under side of the slide, it is necessary to put a drop of immersion-oil on the top surface of the condenser and the under surface of the slide. The slide is then placed upon the stage of a microscope, and the condenser racked fully up. The two drops of oil coalesce and fill the air space between. The objective is then lowered

(using the high dry lens), adjust the mirror, light, and condenser, and the oblique illuminating rays are focused in the plane of the preparation where they illuminate the living spirochetes). The spirochetes appear as shining corkscrews, and their characteristic movements may be observed. The parasite is seen to be actively motile, possessing four characteristic movements which differentiate it from other living spirochetes that are morphologically similar.

The following movements are noted:

1. Rotation on its long axis.
2. Flexion or bending or lashing.
3. Backward-and-forward motion.
4. Slow progress.
5. Contraction and extension of spirals.
6. Dead-white appearance; other spirochetes show a reddish tinge.

The importance of beginning treatment as soon as possible after infection cannot be overestimated, for the longer the spirochetes are allowed to multiply in the tissues the more damage is done to them, therefore it is obvious that energetic treatment should be instituted immediately to destroy them and attempt an abortive cure of the disease.

As a preliminary to this attempt the patient should receive a careful physical examination with special reference to the urine, blood-pressure, and cardiovascular system. If the chancre is anatomically situated where induration is extensive, it should be excised, as it is the primary focus of infection. This procedure, of course, does not prevent the spread of the disease, but it removes pathologically altered tissue in which the spirochetes have a tendency to persist after other symptoms have disappeared.

Opinions differ considerably as to the method of treatment, although it is generally agreed that the combination of salvarsan and mercury is essential to the attempt of early cure. Eight intravenous injections of salvarsan of from 0.4 to 0.5 grams each, or neosalvarsan of from 0.6 to 0.75 grams each may be employed. Most physicians give from five to eight injections at weekly intervals. It is probably as safe and productive of better results to give the injections at three-day intervals.

The three-day interval between salvarsan injections is recommended rather than the five or seven for the reason that the drug, when injected intravenously, is practically all eliminated within forty-eight hours, and an injection given on every third day will insure the presence of arsenic in the tissue fluids constantly throughout the course of treatment, which would seem essential for the rapid destruction of the spirochetes.

If the injections are made at five- or seven-day intervals it would seem obvious that the tissue fluids would be arsenic-free, or nearly so, from two to five days following each injection, a condition that would seem favorable to further development of the unkilled parasites or possibly favor the production of a salvarsan-resistant spirochete,—in other words, we would be substituting an intermittent for a probably more effective continuous sterilization.

Syphilis is not a blood disease, as is popularly supposed. The spirochetes are found with difficulty in the blood after their distribution during the early stage of the disease. Histological examination shows that they predelict the denser connective-tissue structure; spreading from the initial lesion by the blood- and lymph-stream, they are disposed to localize in isolated groups outside the vessels, where they react on the fixed tissue cells, producing the characteristic luetic infiltrations. These infiltrations provide considerable protection to the spirochetes contained within them from spirochetecidal substances introduced into the blood-stream. Thus the administration of the salvarsan compounds, if not sufficient in size and frequency of dosage, probably does not kill off these isolated and more or less protected parasites, where the blood supply is deficient. These unkilled spirochetes are probably responsible for relapses of the disease; for this reason it would seem reasonable that the continuous effect of frequent salvarsan injections would be indicated, especially in the early stage of the disease before the tissues have reacted to the irritation of the invading parasites. Much has been said about the dangers attending too frequent injections of salvarsan; but it would occupy too much time to detail the different opinions on this point. It is generally recognized that it produces toxic effects in some cases irrespective of the amount or frequency of dosage. There are very few reports of serious effects from short-interval treatments, and many patients have been treated with moderate doses of salvarsan or neosalvarsan every second or every day for eight or ten doses, without untoward effect.

Mercury treatment is interspersed with salvarsan in the form of inunctions or insoluble intramuscular injections. The inunction method is, unfortunately, falling into disuse, although it is perhaps the most reliable and effective means

of treating syphilis with mercury, and should be given preference when possible. Sixty inunctions (4 grams) or two courses, with one-month intervals between each course, should be given toward the attempt of abortive cure. The insoluble mercury preparations, mercury salicylate, or gray oil may be used as a second choice. They are given intramuscularly. Thirty mercury salicylate injections, of from one-half to one and one-half grains each or two courses, may be given instead of the inunctions. They may be given semiweekly or weekly. The same dosage and number of injections of gray oil may be used. These eight salvarsan and thirty mercurial injections (or 60 inunctions) conclude the treatment aimed at abortive cure of the disease.

If the diagnosis of syphilis is made in the late primary stage (preceding the secondaries) when the Wassermann is usually positive, a second course of five salvarsan and twelve mercury injections may be given after a month's rest following the first course.

It is possible to inhibit a positive Wassermann by salvarsan or mercury treatment without killing the spirochetes in isolated foci, and a salvarsan injection may light up these foci often at a later period, converting a negative to a positive Wassermann. This is known as the provocative test, and by using this test some cases of latent lues are recognized. The injection should be made twelve months after the Wassermann has been negative, and the blood examined twice, between the fifth and fifteenth day after the injection (Lerrede). Lumbar puncture and spinal-fluid examination should be made at the same time to determine a possible involvement of the nervous system.

At the present time we have no absolute assurance of a cure effected by the abortive treatment, and time plus careful study of many cases will be necessary before we can be certain of its proof. The many cases of re-infection observed since the advent of salvarsan therapy argues for an abortive cure, as we know that re-infection with lues is considered possible only when the disease has been cured.

If the patient has been given the abortive treatment in the early primary stage of the disease before the Wassermann reaction becomes positive, then the continued absence of clinical symptoms with a persistently negative serum and spinal fluid would indicate a complete cure of the disease.

Statistically considered, Werther (quoted from Pusey) believes that 50 per cent of cases of primary lues can be cured by salvarsan. Lier records 71 per cent of successes from a single course of abortive treatment. Of 92 early lesions in Gennerich's later series, 97 per cent have remained clear, and 1 has been re-infected. All of these cases received provocative injections and lumbar punctures.

Hoffman's criteria for determining abortive cure is as follows:

1. The patient must be clinically and serologically negative.

2. Excision of the scar of the primary lesion and examination for spirochetes should be done when possible.

3. A provocative injection is to be given fifteen months after the Wassermann has become negative, with lumbar puncture in ten days after the provocative injection.

4. Freedom from all symptoms for eighteen months or more is essential.

SYPHILIS AND INTERNAL MEDICINE

By J. P. Schneider, M. D.
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In a study, in 1913 and 1914, of the autopsy material of 500 post-mortems, I was impressed with the frequency with which syphilis involved the internal organs. While we have long been duly impressed with the gross pathology of tabes dorsalis, of paresis, and of cerebrospinal lues, and have recently learned properly to evaluate their direct relation to syphilis, we have not been sufficiently alive to the far-from-infrequent syphilitic lesions of the aorta, liver, spleen, heart, larynx, pharynx, bronchial tree, and rectum. From my notes I find that in this promiscuous material syphilis of internal organs other than neural tissue and bones, occurred 62 times. It was a revelation to me to find that the aorta was involved in 28 instances. Curiously enough, many of these affected aortas would have been missed by the pathologists themselves ten years ago, because of our lack of understanding that only too frequently atherosclerosis covers and

marks the specific media lesions, and that for many years such an infected arch may remain free of distortion and dilation. In these 28 luetic aortas four only were definitely misshapen. We must recognize four possible patholigical and hence clinical pictures, namely:

1. Uncomplicated aortitis.
2. Aneurysm formation.
3. Pure aortic regurgitation.
4. Coronary stenosis.

In the 28 instances above noted 14 were of the uncomplicated variety four were grossly dilated; eight involved the roof of the heart, and spread down over the aortic valve seat, agglutenating the segments and producing a pure aortic regurgation. Of these eight, six died a sudden death. In two instances coronary stenosis was present, and classical angina attacks were noted in the clinical record. We must all be impressed with the fact that a blood and spiral fluid Wassermann would be of deciding value in half of the above instances. Clinically, it is well to remember that a patient complaining of a substernal pain in the slightest degree related to exertion needs to be proven clinically, radiologically, and serologically free of syphilis.

In contrast with the frequency of syphilis of the aorta stands the infrequency with which the heart itself is involved. In this series only two occurred: one a gumma of the left ventricular wall, the other of the septum involving the bundle and clinically producing the signs and symptoms of heart-block.

Syphilis of the liver occurred 14 times, and, depending upon the age of the individual and the duration of the infection, varied infinitely in pathology from the diffuse parenchymatous of the new-born to the gummatous, perihepatic exudation and cirrhosis of the adult. Contrasted with the Laënnec type of cirrhosis hepatis clinically it is well to remember that genuine epigastic and right hypochondriac pain is bitterly complained of in the specific type. Late, when ascites is present, a study of the ascitic fluid may be of differential value, for, while in the Laënnec cirrhoses this is a transudate in the luetic type it is frequently an exudate from the perihepatitis. There are few late luetic lesions so amenable to treatment (proper intensive arseno-benzol medication) as hepar lobatum.

Syphilis of the spleen occurred four times, in three instances in association with the liver lesions, once as a diffuse splenitis, microscopically showing the presence of the spirochete. It is well to bear in mind that the clinical complex of idiopathic pernicous anemia may be produced by rather sharply localized syphilis of the spleen. It is also of value to know that, while such a splenic lesion may yield to intensive arsenical treatment, splenectomy may facilitate recovery rather strikingly.

Destructive gummatous infiltrations of the pharynx occurred three times, two involving the posterior wall, the third the posterior pillar and soft palate. The larynx was the seat in four instances, and in one case was mistaken and treated for tuberculosis. It is wise in all instances of indolent and destructive lesions of these parts, and also of the tonsils themselves, to have a well controlled Wassermann done before surgery is invoked. There is great satisfaction in the specific intensive treatment of these lesions.

In three individual cases the gummatous process involved the bronchial tree, once in association with cancer, and in the other instances leading to stenosis of large bronchi and death before the nature of the process was recognized. How closely this involvement may imitate phthisis was taught us in the case of a man of forty-five a few months ago, in whom the presence of a daily afternoon temperature and repeated hemorrhages from the lung led to his having resided for a period in a sanitarium. The characteristic peribronchial shadows on a chest ray with a four plus Wassermann, led to specific treatment with excellent result.

Syphilis of the rectum occurred four times. In but one instance did it lead to death, and that as a result of cancer developing in the stenosed area. The picture may vary tremendously, from slight infiltration or destruction of the rectal wall just above the sphincter to the final well-known tent-like stricture. All four of these involvements were easily within reach of the examining finger, or could be readily inspected with a short proctoscope. If one bears in mind that not all rectal diseases are simple hemorrhoidal in nature, and remembers that, after cancer syphilis is a close second, one will not be so frequently misled until cicatrization will have advanced to a hopeless degree of stenosis.

GENITO-URINARY SYPHILIS

By Franklin R. Wright, M. D., F. A. C. S.
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We have learned to look on syphilis as a constitutional disease. As a matter of fact, syphilis, beginning as a local disease, becomes constitutional, and then, again, as it becomes older, returns to be a local disease, being general only in the sense that any organ in the body may be attacked. And the fact that we do not recognize syphilis of the various organs is not due to the fact that it is not there, but is due to our inability to make diagnoses.

My subject is "Genito-urinary Syphilis," and I have chosen to make a few notes about the old lesions rather than the early ones, which everybody is supposed to know. The first investigation of syphilis of the kidney, made about 1840 (these statistics are from Malzenauer on syphilis), was based upon reports of 2,400 cases of post-mortems made on patients dying from nephritis. In this series in 49 cases the nephritis was due to lues, or 2 per cent of the cases. In 186 post-mortems made on persons who were known to be luetic, kidney lesions occurred 125 times. As to the character of the lesion in syphilis of the kidney, two-thirds of the cases show either parenchymatous or interstitial inflammation; and about one-eighth of the cases show scars. One-eighth of the cases show partial atrophy, which may occur in one kidney or both; and about five-eighths of the cases show gummas in some form. The albuminuria that goes with acute syphilis is not to be diagnosed as a nephritis, but is to be classed, rather, as a toxic albuminuria. In the prognosis of this toxic albuminuria, we have the albuminuria together with hyaline casts, never degenerative casts. It disappears in two or three weeks with reasonable treatment.

The nephritis occurs as either acute or chronic. Acute syphilitic nephritis is always accompanied by malignant syphilis; it is never found in the ordinary mild case. The character of the lesions that are found in the chronic cases consist of either a parenchematous or a chronic interstitial nephritis or sometimes other lesions. To date clinically we have no way of telling the one from the other, that is, the syphilitic nephritis from the Bright's disease, except that there are certain conditions which occur or which are missing which may be of diagnostic help.

Syphilitic nephritis is not accompanied by high arterial tension nor a hypertrophied heart. If we have a nephritis with those things we can safely say it is due to some other cause than general nephritis. In general nephritis the hypertrophied heart and the high blood-pressure, which goes with nephritis, are not due to the condition of the kidney.

So, in any case where we find a chronic nephritis not accompanied by hypertrophied heart or not accompanied by high blood-vessel pressure we are apt to be suspicious that it is syphilis.

The other thing is, that syphilis may affect one kidney and not the other. Every once in a while some doctor reports a case of one kidney with Bright's disease and one kidney normal. Bright's disease is a constitutional poisoning, and it must affect both kidneys equally. So I think if one makes a diagnosis of a one-sided Bright's disease it would be reasonable for him to expect to find that this is a syphilitic condition.

As to the treatment of these cases there is not much to be said, because they are so rare that modern treatment has not been applied to them. But in the old treatment before we had salvarsan, iodide of potash was used with good results. Personally, in my experience of twenty years in which I have treated about twelve hundred cases of syphilis I have seen only one case of general nephritis due to syphilis.

Syphilis of the bladder is also a rare condition. It has been described as gummatous and in the small papular lesions. It occurs so rarely that we do not make a clinical diagnosis. I have seen but one case. A woman, thirty-three years old, came into the University Hospital on the 23rd of September, 1916, complaining of painful urination, real tenesmus. A bed-pan was furnished. An accurate record was kept of the amount of urine so passed, and it was found to be only 350 to 400 c.c. in twenty-four hours. This woman had undergone four abdominal operations for pelvic trouble for no other reason than pain, but four times she submitted to operation. The last time a hysterectomy was made, so that she had nothing left in her pelvis but a bladder, the stump of a uterus, and pain. She was treated twelve days in the hospital by irrigation of the bladder without improvement. On cystoscopy we found a circular lesion, probably one-half inch in diameter, that looked as though someone had run a curette around it and made a

blood clot. I made a diagnosis of superficial gumma, gave antileutic treatment, and in thirty days she left the hospital passing the normal amount of urine and in apparently normal health.

Syphilis of the prostate is another condition which occurs as a local disease and is frequently overlooked. Casper, in his book, edition of 1910, says that he could find records of only six cases. We have records of two cases. The clinical finding in this condition is a slightly enlarged prostate, which is somewhat elastic and uneven, but not nodular on the surface, and is excessively tender to pressure. The passage of the catheter is also excessively painful, so that the two men whom I have seen would beg me not to catheterize them, even to find out the condition of the prostate. These cases of mine have both got markedly better from treatment.

The testicle is the seat of late syphilis, relatively frequently compared with other genito-urinary organs. We have developed in the testicles either gumma or interstitial disease. In interstitial disease the testicle becomes evenly enlarged. It is pear-shaped or egg-shaped, small end up; it is not painful; and it becomes heavy. It is slightly sensitive, but it fails to give the characteristic pain or sensation on pressure that the normal testicle does. The epididymis in ordinary cases is not involved in these cases. Where gumma is present it appears simply as a round nodule that develops in the testicle, as it increases in size and becomes adherent to the overlying skin, and breaks down and discharges ordinary gummatous, gelatinous material which gives this tumor its name.

The epididymis is attacked rarely; it occurs both in interstitial and as a gummatous inflammation. Early in syphilis we have occasionally an infiltration or interstitial inflammation; in latent syphilis we have gummata more commonly.

Within the last few years we have discovered that a great many of the cases that have been diagnosed as hydrocele are due to syphilitic thickening of the epididymis. This thickening occurs later in the disease. It is an interstitial inflammation, and the whole epididymis becomes smoothly and evenly enlarged. It is not painful, and, if the inflammation runs up the cord, the whole cord may thicken. I have seen one that went clear to the internal ring, so that the cord was three-fourths of an inch in diameter of hard tissue. Syphilis is not an exudative process, but these cases develop hydrocele. The probable explanation of this is, not the fact that this is an exudative inflammation, but the fact that the thickening in the epididymis produces rather a passive transudate than an active exudate. These cases all yield to treatment reasonably well.

I had one case in which I made a diagnosis before we opened where we could see the pathology and in which we gave two hypodermics of mercury. This small amount of treatment reduced the circumference of the scrotum from eleven and one-half to nine and one-half inches in one week and when the patient came back for the third injection the circumference was two and one-half inches less than when the first was given.

Disease of the testicle does not interfere with the formation of the spermatozoa. One of these men became a father while he had syphilitic epididymis. They are reduced in number simply because the part of the testicle involved is not working. If the disease goes on to the point where all the testicle is involved, of course, the whole operation is shut off, or, if the epididymis becomes involved so that the vas deferens is obstructed, then no sperm can issue. One writer has made the statement that the reason so many men are sterile is because of the microscopic changes of the tubules of the testicles that give no clinical symptoms, and he also makes the statement that 50 per cent of all men who have syphilis are men that are childless.

DIFFERENTIAL DIAGNOSIS IN NERVOUS SYPHILIS

By W. A. Jones, M. D.
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The diagnosis of nervous syphilis at the earliest possible time is very essential, on account of the large number of persons in whom syphilis is the primary factor in many nervous diseases. There are, undoubtedly, numerous cases of nervous diseases which are handed down from syphilitic parents or grandparents, but the strain of syphilis has, seemingly, disappeared, and yet the indications are that somewhere in the life of the individual or his ancestors syphilis has left its mark, or has produced structural changes which account for the indefiniteness of symptoms; consequently, old syphilis, whether acquired or inherited, may be present and frequently is unrecognized. Then, too, the old syphilitic process changes, and causes a variety of types of nervous disorder. Some of the types are purely diseases of the nervous system, and, in other instances, the syphilitic disease is in organs which are directly in touch with the nervous system, and which have a specific origin, but do not show themselves in distinct and definite types.

The diagnosis of nervous syphilis is, first, dependent on the type of the individual and his susceptibility to infections of whatever kind. Next is the history of an infection, syphilitic in origin, and often very difficult to analyze; and sometimes it is very difficult to get a reasonably clear history of syphilis. Moreover, on account of the variability of the individual and his inherent traits, his specific disease simulates other diseases of the nervous system. We have the frank and plain evidence of nervous syphilis, even though the nervous symptoms follow after a long period, varying from a few months to thirty years; one can readily see how this would complicate a differential diagnosis.

Perhaps first and foremost, from a differential point of view, is the similarity between the clinical symptoms of chronic alcoholism and the symptoms of general paralysis of the insane, commonly termed *paresis*. The difference here may be determined largely by the laboratory findings, and yet, in some instances, it is not possible to clearly separate these two disorders when one considers that there is a mixed infection and a mixed intoxication. Then, too, there are many cases in which the alcoholic has a frank syphilis; and when the two (the infection and the toxic condition) are active, the situation is often confusing.

A physical examination usually shows some of the cardinal differential points. In syphilis the pupils are usually different in size and in form; and a pupil that is irregular, elliptical, or larger than its fellow, is very suggestive of a syphilitic origin. Someone has said that the left pupil is more apt to be larger than the right. When a fixed pupil exists, and the knee-jerks are unobtainable, or are obtained only with great difficulty and by reinforcement, one must immediately consider the possibility of a developing tabes, a posterior spinal sclerosis. The usual methods of diagnosticating tabes will clear up any uncertainty that one may entertain. But, again, if this condition is associated with alcoholism, with its stupor and mental phases, due to a wet brain, further investigation may be needed to determine the relative value of the two disorders. One precaution may be sounded as to the value of the blood Wassermann and the spinal-fluid Wassermann. In the papers read before you this afternoon, you have heard of the uncertainty of the serological findings; and one must be prepared for an occasional uncertain diagnosis, for in both of these diseases (alcoholism and nervous syphilis) there is a tremor, usually of the extremities or of the tongue, and the safest method in differentation is a spinal puncture with notation of the pressure of the spinal fluid, and the reaction obtained for syphilis, as well as a positive globulin and excess albumin. When the neurological symptoms predominate, however, and there is a persistent tremor or a persistent special defect shown by the alteration of the reflexes, and particularly the defective reflex in the pupil, the probabilities are that syphilis is the fundamental cause of the disease.

When one considers the frequency of spinal disorders originating on a syphilitic foundation, the one chain of symptoms that is extremely reliable, is the multiple distribution and variability of the symptomatic picture. Variability and irregularity in sensation, with or without a Wassermann test, would suggest syphilis as the causal factor. We must not overlook, in our search, the various organs of the body which may be the seat of syphilis, for instance, the aorta, which is frequently the seat of syphilitic infection, and from this point many nervous symptoms may arise which will assist the examiner in making a diagnosis.

The examination of the skin is quite as important as the examination of other tissues of the body, and occasionally a skin disease accompanied by nervous symptoms will reveal the cause of the disease under investigation.

It is well, too, to remember that syphilis is frequently accompanied by a disease of the meninges and the surface of the cord or brain. In these cases the multiple symptoms are the guiding lines. For instance, in a meningomyelitis it is not difficult to differentiate from a transverse myelitis, or from a compression paralysis of the spinal cord. The main differentiating points are the severe pains and the preliminary neuralgic symptoms, which point to something other than a myelitis. Then, too, these multiple points come and go, and thus indicate multiple lesions. Sometimes multiple sclerosis is difficult to diagnose because of its sudden changes in the group of symptoms. And sensory disorders with irritation are present in sclerosis, as are the intention tremor, and localized disturbance, the partial optic atrophy and the nystagmus. All of the latter symptoms are due to diseases other than syphilis. There are other multiple diseases, such as sarcomatosis and carcinomatosis, which are sometimes confused with spinal syphilis; and the diagnosis is cleared only under treatment. In other spinal-cord diseases, bladder and sensory disturbances accompany syphilis, whereas in the common spastic spinal paralysis these symptoms are not apt to exist. Erb's syphilitic spinal paralysis is looked upon as only an initial stage of chronic meningomyelitis, due to syphilis.

The differentiation between syphilis and tumors, whether of the brain or cord, is sometimes very difficult, but, if one remembers that there are many tumors of the brain which have long been recognized as positively classified, much of the diagnostic trouble is eliminated. Thus, acusticous tumors are always fibromata. Tumors of the brain-stem in children are usually tubercular. Tumors of the pons usually are gliomata. Tumors of the hypophysis are mostly adenomata, and tumors of the fourth ventrical will always suggest cysticercus. Basal cerebral nerve paralyses usually point to gummata. Whenever syphilis is found in the history of the patient, or by signs on the body, or if the pupillary reflex is rigid, the case is one of syphilis. Lymphocytosis of the spinal fluid presupposes the presence of a tumor almost exclusively in syphilitic disease. When tumor-symptoms pointing to the nervous system arise from metastatic growths, we know then the character of the tumor,—that is, it is secondary to cancer or syphilis or some other form of tumor.

The attempt to treat cases of suspected syphilis will often help us in our diagnosis, and the confusion of symptoms in brain or cord syphilis sometimes can be cleared up by a systematic line of treatment. One must keep in mind the various toxic disorders, such as arise from diabetes and chronic nephritis, and associated with focal symptoms; here the urinary finding will usually solve the problem.

We know, also, that many arterial diseases are nonspecific in character, and we are beginning more to fully realize that a large number of arterial disorders are due to syphilis; and it is difficult to separate these two conditions unless there is a clear and definite history of syphilis. With arterial syphilis we may have all sorts of paralytic conditions, local or general; and the recognition of the type with which we deal will make a great difference with our prognosis Then, too, we are constantly meeting with psychoses, due entirely to a specific infection and yet unrecognized for want of special and definite examinations. It is sometimes possible to classify these psychoses into toxic forms or due to infections, and definitely of syphilitic type.

These nervous and borderline mental states vary in degree from a neurasthenia to a psychasthenia and a definite and classifiable psychosis; and they all present the same problems; and the solution of the problem is the elimination of syphilis. In many of the psychoses the patient must be under observation and treatment, and dealt with as any other illness, and careful histories must be taken with a view to ascertaining the type and character of the individual and his ancestors. Then, with the laboratory findings, which must be carried on over a longer period of time than is usually done, we are able to define the mental or nervous disorder.

The syphilization of the world will probably go on much more actively now that civilization has almost disappeared, and the probabilities are that definite types of nervous syphilis will be brought to our shores, incidentally or accidentally, and again our problems may increase.

THE TREATMENT OF NEUROSYPHILIS

By A. W. Morrison, M. D.
MINNEAPOLIS

The treatment of syphilis of the nervous system should be prompt and active, in that small lesions may cause, by their close association with important nerve centers, extensive and irreparable damage, and the best results from treatment self-evident when one considers that in late neurosyphilis not only is it more difficult to reach the spirochete, but often nerve tissue has been so injured by the action of the toxin that it is beyond all repair, and all we can hope for, in the way of a cure, is to prevent further progress of the disease.

There may be a meningeal reaction in the very earliest stages of syphilis; and, further, this does occur in many cases, as is evidenced by one or more of the spinal-fluid reactions being abnormal. That such a reaction takes place is frequently forgotten, for the patient may present no gross involvement of the nervous system, although some authors go so far as to state that clinical symptoms, precisely like those of a paretic or a meningovascular non-paretic, occur in a full third of all cases during the secondary stages. Fortunately, intensive treatment with arsphenamine and mercury is often sufficient to promote a cure at this time, but that such is not always the fact, or because the patient has received insufficient treatment, is only too well illustrated by a certain number of supposedly cured cases later developing well-defined neurosyphilis. I am convinced that thorough intensive intravenous treatment of early cases over a prolonged period would prevent the development of much late syphilis, and this early treatment is all the more important when one considers that the involvement of the nervous system at this time is, as it were, superficial, while later the diseased regions are not always so accessible or yield so readily to medication. A spinal puncture with negative spinal-fluid findings should invariably be demanded as evidence of a cure at this, or any other, stage.

There has been, and still is, considerable controversy as to the best method of treating neurosyphilis, the intensive intravenous, the intraspinal, and the intracranial methods each having its supporters.

The intensive intravenous method consists in the intravenous injections of arsphenamine every third to sixth day, over a period of several months, and, in addition, giving weekly intramuscular injections of mercury salicylate. Some go so far as to give arsphenamine, or one of its allied products, intravenously every other day for three or four weeks, following this with a course of mercury. The mercury may be given in the form of rubs or intramuscularly, each method being efficacious. Mercury by mouth is inadvisable, owing to its uncertain action; however, it may be used after a course of intensive treatment.

The adherents of the intensive treatment claim that it is less dangerous and there are fewer complications than with intraspinous therapy; that, if properly given, it is fully as efficacious in that the remedy reaches the lesion both by way of the blood-vessels and, possibly, by the spinal fluid, since the permeability of the choroid plexus to salvarsan in small amounts has been shown experimentally. It is further stated that substances introduced into the spinal fluid directly are quickly absorbed into the venous system, and that such form of medication does not come directly in contact with many forms of lesions in neurosyphilis, as the diseased parts are not superficial, except in the very earliest stages, but deep-seated or vascular, and there is very little absorption of the cerebrospinal fluid by the cortical or spinal cells. Others think that the results secured by intraspinal therapy are due to the increased permeability of the choroid plexus, which follows the intraspinal injection of any irritating substance, such as a chemical or a serum.

With the hope that salvarsan and mercury would be more likely to pass into the subarachnoid space if the spinal fluid pressure were lowered, removal of 30 to 40 c.c. of fluid by spinal puncture once a week, as an adjunct to intensive treatment, has been employed. It is probable, however, that the antibodies present in the blood serum, and passing into the spinal fluid, play a more important part than the minute quantity of the drug does.

Of the several different methods that have been evolved for bringing the drug immediately into contact with the central nervous system, the intraspinal injection of autosalvarsanized serum, according to the technic of Swift and Ellis, is the most satisfactory. Though this serum contains only small particles of arsenic, it is definitely spirocheticidal. The methods of Ogilvie or Ravaut, consisting of spinal injections of serum or

of sodium chloride solution to which salvarsan or neosalvarsan has been directly added, and the method of Byrnes, employing mercurialized serum, give no better results, and are certainly more dangerous and cause a greater reaction. The latter serum, the mercurialized, however, has the advantage of being inexpensive, and a considerable quantity can be prepared at one time and used over a number of weeks of treatment.

The arguments offered in favor of the intraspinal methods are that many cases have been improved or cured, both symptomatically and serobiologically, after intensive treatment had failed to relieve the pains, crises, or bladder symptoms, or change the reactions of the spinal fluid; and that, as treatments are given at longer intervals, an arsenic dermatitis, nephritis, or severe gastro-enteritis does not develop, as has been reported, following intensive treatment.

The intracranial method, consisting of the intraventricular or subdural injections of one of the previously mentioned serums, has been used, especially in the treatment of paretics, and its exponents believe that if they have not cured the disease they have prolonged the remissions.

With these rather conflicting reports before us, what is the rational method of procedure in treating neurosyphilis? In considering the treatment we must also consider that what we hope to accomplish is, not only a relief of symptoms, but, at least, an arrest of the disease. Of course, if the changes in the nervous system have proceeded to a point where there is an actual destruction of nerve tissue, no treatment will cause this to regenerate, but neither symptomatically nor serobiologically are we able to tell to what extent this degeneration has proceeded, for severe symptoms do not always indicate an actual degeneration of nerve tissue, but may be due to an inflammatory process, so we should employ any or all methods that have shown themselves to be of use. Further, in considering the results, we must consider, not only an alleviation of the distressful symptoms, but the reaction of the spinal fluid, for this, to say the least, is as important an index of the activity of the disease as is the clinical picture.

No set rule for treatment can be laid down, for each case should be a problem in itself, but, generally speaking, the intensive intravenous is the method of choice in the early or secondary phase of syphilis, and will be effective in the large majority of cases. This method should also be the first employed in the treatment of later neurosyphilis, being less dangerous and less likely to cause complications than intraspinal therapy, the number and frequency of the treatments depending on the reaction of the individual case. In these cases which do not respond to this method, either alone or combined with spinal drainage, intraspinal treatment, using autosalvarsanized serum, may be tried, for there appears to be no question but that some cases do respond to this method when the simpler method has failed. However, it must be borne in mind that serious results have followed the intraspinous treatment, and it should not be employed until we are convinced that no further improvement is to be expected from the intensive, and then should be used only where there are proper laboratory facilities. Owing to the disappointing results obtained in paresis from all forms of treatment, the intracranial route hardly seems justifiable, especially as treatment by one of the simpler methods in the early stage, the only stage in which we can hope to accomplish much, appears to secure as good, or nearly as good, results.

One or more courses of treatment should be given after the reactions of the spinal fluid have returned to normal; and, in controlling our treatment, it must be borne in mind that a negative blood Wassermann is no indication of a negative spinal fluid, and that a positive spinal fluid that has become negative under treatment may again show a positive Wassermann, or increased cell-count. Further, a regression of symptoms and a return of the spinal fluid to normal may go hand in hand, but this is not always the case, the symptoms sometimes persisting after the spinal fluid is normal, or, what is more common, the symptoms disappearing and the spinal fluid showing that an active process is present.

The important points in treating all forms of neurosyphilis are to get the patient early, to give energetic and prolonged medication, preferably, and certainly at first, by intravenous injections of arsphenamine combined with mercury and the iodides, and not to be satisfied with a symptomatic cure alone. Therefore, not only should the treatment be controlled by repeated examinations of the spinal fluid, but, even after the patient is pronounced cured, he should be kept under observation for several years, and the reactions of his spinal fluid followed, as well as observed clinically.

(On account of the lateness of the hour when the Symposium closed, there was no time for discussion. —The Editor.)

ANAL FISSURE

By W. A. Fansler, A. M., M. D.
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MINNEAPOLIS

With our current literature already overloaded with the articles of diligent writers, it would seem almost a waste of time to devote a paper to a condition apparently so trivial as anal fissure. However, there is probably no comparatively simple local condition which causes more excruciating pain or more nearly will wreck a patient's general health. Also, there is probably no condition of which the diagnosis and treatment are more commonly and persistently overlooked.

Anal fissure is what the name implies,—a crack in the mucous membrane of the anal canal. Were this slight lesion situated elsewhere it would attract no attention, and would soon heal, but, situated in the anal canal amidst an abundant sensory nerve supply and within the spasmodic grasp of the anal sphincter, there is a different story. This crack, or fissure, may be either single or multiple, although in the majority of cases it is single and most frequently is situated in the posterior commissure of the anal canal. A number of causes are assigned as to the etiological factor in fissure, but the most logical and generally accepted cause is that of a mechanical abrasion of the anal mucous membrane, which may be brought about by the passage of a large constipated stool or one containing some sharp edge or foreign body. Occasionally a true fissure may follow an operative procedure. Hemorrhoids are also frequently assigned as a cause, but, I believe, they are merely an associated condition. Ball states that he believes the cause to be a tearing down of one of the anal valves, and this valve then forms the so-called sentinel pile, which frequently accompanies fissures. In most cases this sentinel pile does not exist during the first stages, and Ball's theory is not generally accepted. Occasionally the introduction of a foreign body, such as a syringe nozzle, will produce a fissure, but such fissures are not common. In a general way I think the ground is covered when we say that all fissures, except specific, are produced by some mechanical injury to the anal mucous membrane.

The diagnosis of anal fissure, almost always, can be made from the history alone. The patient will say that he has excruciating pain at the time of defecation, although in some cases there are paroxysms of pain occurring at other times. The pain occurring during the act of defecation is sharp and excruciating, and is followed by a period of dull, agonizing aching, lasting from a few minutes to several hours. The pain is frequently so severe that the patient will become faint and nauseated, and a strong man may be completely unnerved and incapacitated for the entire day. There are cases on record where chloroform has been inhaled to make the act bearable, and the formation of the drug habit is common. I have seen cases where the hypodermic injection of one-half grain of morphine would scarcely suffice to relax the spasm. The degree of pain is largely determined by the condition of the stool and the state of the sphincter ani. With a soft stool the pain is relatively slight, but with a large hard stool the reverse is true. The after-pain is due to the spasmodic contracture of the sphincter, and its duration and severity depend upon how much this muscle is hypertrophied. In old cases it is almost always hypertrophied from frequent spasm. In new cases there is no hypertrophy unless some one previously existing irritation, such as pruritis or internal hemorrhoids. Given, then, a history of severe pain occurring at the time of and following defecation, and dependent to a certain extent upon the consistency of the stool, the diagnosis is practically made. No other rectal condition will give this combination of symptoms; and physical examination will quickly verify the diagnosis, and disclose any other complicating conditions.

On inspection of the parts there is often a redness or irritation around the anal margin due to an irritating secretion from the fissure. In the older cases there is a "sentinel pile," or skin tag, at the cutaneous margin of the fissure. This may vary is size from that of a grain of wheat to the end of a finger. In recent cases no sentinel pile is present, and the fissure appears simply as a break in the continuity of the anal mucous membrane. In recent cases when the anal canal is slightly dilated, it is seen that the base of the fissure is composed of the normal tissues which underlie the mucous membrane and which shows its vitality by bleeding. In the older cases there is a considerable deposit of scar tissue, which gives the base of the fissure a rather glazed, dead-white appearance, and there is no bleeding unless this scar is torn through to the healthy underlying tissues. The sphincter is tightly contracted.

The diagnosis, then, is easy, the treatment is relatively simple, and there is no procedure which is attended with more uniformly successful results. The whole underlying principle of treatment is based on two factors: the conversion of the fissure into a healthy wound, and the relaxation of spasm of the sphincter, thus putting the part at rest. The relaxation of the muscle is absolutely essential, and, unless this is done, no treatment will be successful. The two most frequently used means for securing this are the severing of the external sphincter at right angles to its fibers, or the thorough stretching or divulgence of the muscle. Owing to the extreme sensitiveness of the parts this is usually done under general anesthesia, but I have found this unnecessary, as is, in most cases, the extensive infiltration anesthesia practiced by Braun, Allen, and others. Neither have I had to resort to the severance of the fibers of the external sphincter. By remembering the principle involved in producing a cure, I have been able to treat all of my cases as ambulatory cases, and by less radical measures.

In general, the treatment employed is the same in all cases, but, as in all diseases, there are certain variations which depend upon the stage and extent of the pathological change. In cases where the fissure has been present only a short time, the hypodermic injection of a quarter grain of morphine and cocainizing the anal canal with a cotton applicator will often permit a sufficient stretching of the anal sphincter to produce a cure. Usually this is not enough. I will give the procedure employed: I have found that these patients, almost without exception, are very nervous and apprehensive, and so they are given one-quarter grain of morphine or one-third grain of pantopan hypodermically. This being done, it is now necessary to desensitize the anal canal sufficiently to allow the introduction of the index-finger. To accomplish this, a well-lubricated 1-cm. Kelly open-air cystoscope is introduced into the anal canal, and the obturator withdrawn. An applicator saturated with 5 per cent cocaine solution is now passed in, and the cystoscope withdrawn over it, leaving the applicator in place in the anal canal. In a few minutes anesthesia is such that the index-finger, which is to act as a guide, may be easily introduced. In the worst cases the sphincter and adjacent tissues are infiltrated with 0.5 per cent novocaine and apothesine after the method of Braun and Allen. That is to say, the perianal region having been cleaned with iodine and alcohol, a needle is inserted subcutaneously near the anus, and the perianal skin is infiltrated. Then inserting the index-finger into the rectum and hooking it around the sphincter, the needle which is held in the other hand, is inserted straight into the sphincter muscle parallel with the rectal wall, and moving the needle the sphincter and adjacent structures are infiltrated. This requires a long needle, as the infiltration is frequently carried in to the depth of three or four inches or more. Four such infiltrations are made parallel to the anal canal and rectum at points equidistant around the anus. Braun says the insertion of the finger as a guide is unnecessary for those experienced in the work. Personally, I believe this should not be neglected for by using the finger, you are able to tell the exact location of the needle point at all times and to avoid accidents that are sure occasionally to occur if this precaution is not observed. The method described will produce anesthesia in any case, but, as a matter of fact, I have seldom found it necessary to use any such extensive infiltration. By inserting a needle along the base of the fissure and injecting the underlying tissue and muscle adjacent to it, I have been able to produce anesthesia sufficient for my purpose. The infiltration having been made to suit the case, we are now ready for the next step, namely, the stretching of the sphincter. A Pratt's bivalve speculum is inserted and the blades slowly opened. If this is done very slowly, sufficient dilation can be secured with very little pain. I believe that a real divulgence or actual "tearing asunder" of the sphincter fibers is unnecessary, and it simply gives added pain and delays recovery. The muscle stretched, the fissure itself is next attended to. If no scar tissue is present, it is not touched or at most simply painted with 5 per cent silver nitrate. If scar tissue is present, the area is grasped with a pair of tissue-forceps and excised in toto. The sentinel pile, if present, is removed.

We have now accomplished the two fundamental things necessary to produce a cure, namely, relaxed the spasm and converted the fissure into a fresh healthy wound. The patient is able to go home soon after the treatment is completed, and to return to work in twenty-four hours or less. Little after-treatment is necessary. It is essential that the bowel movements be kept soft. To accomplish this liquid petrolatum or cascara has proved the most satisfactory to me. The fissure itself may be treated with some mild dusting-powder or cauterized with silver nitrate if granulation tissue forms and delays healing. Healing is usually complete in from two to three weeks.

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THE JOURNAL-LANCET AND THE NORTH DAKOTA STATE MEDICAL ASSOCIATION

Since these pages were made up ready for the press, word comes to us that the North Dakota State Medical Association last week renewed its contract with THE JOURNAL-LANCET as its official organ.

THE 1919 MEETING OF THE AMERICAN MEDICAL ASSOCIATION

As is its custom, the A. M. A. met at Atlantic City this year (the third). The registration amounted to more than 4,900, with the final count expected to reach 5,000, the largest registration ever made in Atlantic City. There were all sorts of people there, that is, all sorts of doctors. There were numerous men in khaki, from privates to high officials, and it gave the Boardwalk, with its cosmopolitan crowd, a touch of color which reminded one of the four years of war. Incidentally, the hotel capacity was taxed to its utmost. In spite of the enormous structures, varying in size and architecture from the simple and ornate to the ponderous, as well as the old time boarding house, the place was crowded. And even then it was almost impossible to house the Association, partly due to the fact, though, that other conventions were held there.

Some of the men who were late in making their reservations fell into the hands of the Philistines, and were illy cared for. But those who were foresighted secured comfortable quarters. It was only the occasional man, accustomed to all the luxuries of home and of bathrooms, who secured only a simple unadorned room, much to his discomfort, but he, perhaps because he had been a soldier or a medical officer, was able to endure the temporary annoyance.

The weather was more or less irregular in its daily temperature, and was tremendously foggy, which perhaps accounted for the fact that some of the papers of the various Sections were equally foggy.

One decided improvement inaugurated by the officers of the Association, was the shortening of the programs, so that some Sections held but one session, and that session was prompt, concise, and terminated at a proper hour. This gave the men of other Sections an opportunity to see what their fellows were doing in other lines of work, which added greatly to their instruction, and gave them an opportunity to meet some of the men outside of their own specialty. This short program was quite in contrast with some of the programs of the Congress of American Physicians and Surgeons. The contrast was particularly noticeable in the meeting of one of the Sections in which the program was ponderous, overflowing, and unbalanced, so that the session beginning at nine o'clock, at least so announced on the program, sometimes lasted until after two o'clock in the afternoon. The readers of some of these papers were given thirty minutes in which to write all that was worth writing in their contributions. Again, in contrast with this needlessly long and overburdened program, was the short, snappy session of the Section on Clinical Research. Their programs began on time, each paper was limited to ten minutes, and the discussion following to three minutes, so that the program was completed on time without undue fatigue, for it was remarked by several men that after attending the meetings of the A. M. A. and the Congress they were utterly exhausted and suffered woefully from mental fatigue. Some of the more courageous stayed over to attend the meeting of the Medico-Psychological Association in Philadelphia. What their mental and physical condition will be at the end of the session will not be known for some months. At all events, it may be said, without fear of contradiction, that they were tired out.

The A. M. A. this year did away with the Section banquets, and it is earnestly recommended to the Congress that their Sections give up the time-honored but stupid dinner.

The exhibits were wonderfully well planned,

and, judging from the crowds surrounding the booths and the sales made, indicated a tremendous business revival.

The next meeting of the A. M. A. is to be in New Orleans, but the date of the meeting will not be fixed until the winter or spring. Undoubtedly, the men in charge will take into consideration the heat in New Orleans in June, and, for comfort's sake, it is to be hoped that the A. M. A. may decide for an early meeting, say, in April. This, however, will in no way interfere with the Minneapolis Clinic Week, which is scheduled for the same month.

The principal officers elected at Atlantic City for the following year are as follows: President, Admiral William C. Braisted, Surgeon-General U. S. Navy; First Vice-President, Dr. D. L. Edsall, Boston, Mass.; Second Vice-President, Dr. Emery Marvel, Atlantic City, N. J., the man who headed the Committee of Arrangements at Atlantic City; Third Vice-President, Dr. E. S. Talbot, Chicago; Fourth Vice-President, Dr. George H. Kress, Los Angeles, Calif.; Secretary, Dr. Alexander R. Craig, Chicago, Ill. (re-elected); Treasurer, Dr. William Allen Pusey, Chicago, Ill. (re-elected); Speaker of the House of Delegates, Dr. Hubert Work, Pueblo, Colo. (re-elected).

The members of the Board of Trustees whose time had expired, were re-elected.

On the Council on Health and Public Instruction, Dr. Haven Emerson, New York, takes the place of Dr. H. M. Bracken, of Minnesota.

On the Judicial Council Dr. I. C. Chase, Fort Worth, Texas, was elected to fill the unexpired term of Dr. James E. Moore (deceased), of Minneapolis.

Dr. Arthur Dean Bevan and Dr. Isadore Dyer were elected to the Council on Medical Education.

On Scientific Assembly Dr. J. B. Blake, Boston, Mass., was elected.

THE MEN WHO READ PAPERS AND THE MEN WHO DISCUSS THEM

The man who reads a paper before an assembly in a room with unknown acoustic properties, as well as the man who discusses the paper, should at once, in the majority of cases, take a course in a school for expression and public speaking, because for all of the unfortunate circumstances which surround both of these men the audience pays the price, that is, the listener strains his auditory apparatus attempting to make out what the speaker is saying. Many of these unfortunate professional men open their lips about a quarter of an inch and talk to themselves below their larynx. Consequently, it is impossible for the listener to do anything but swear under his breath, and wonder why the man does not lift his chin, open his mouth, and speak loud enough to be heard. This criticism applies to some of the great men of the day, and it is a happy and fortunate incident to hear a man with a clear carrying voice. It is a pleasure to listen to such a man, whether he has anything good to say or not, for one can at least hear some things clearly enunciated. These poor speakers must be a great trial to the stenographer, for, as a rule, they all seem to seek out a corner, shrinking, as it were, from inspection and so talking that their words are not apprehended by the stenographer, nor by the audience.

It might not be an impertinent suggestion for the Program Committee to take these deformities of voice into consideration when the program is made up. Then, too, the man who discusses the paper perhaps suffers a little from embarrassment, although this is a rare trait found in a medical man. At all events, he frequently does not grasp the subject, and consequently does not adhere strictly to the point brought out by the essayist.

Mr. William Whitford, the official stenographer of the A. M. A., has written an admirable essay on "Physicians As Speakers." His paper is in pamphlet form, and those who are in doubt about their ability to make themselves heard, and who are the subject of this critical editorial, are recommended to send to Mr. Whitford for a copy of this very excellent reprint. Mr. Whitford gives so many classifications to speakers that I am sure that every one will profit by his monograph. For instance, he says that a clear, distinct, unassuming speaker who talks with absolute precision and with perfect grammar is a *rara avis,* meaning, of course, that he is a "rare bird."

One speaker was particularly attractive to the editor, who looked upon him with envy as he heard his carefully selected grammatical expressions. He talked upon a subject which demanded the use of rare words. The subject was a purely scientific one, and the speaker's words were out of the path of the ordinary man. For instance, one phrase illustrates a few of his snappy expressions: "The possible physico-chemical relationship of bivalent kations to the maintenance of the necessary synaptic threshold

resistances." This phrase, chosen at random, would mean little to the average hearer, but, if one heard the paper, he would appreciate what the phrase means. This speaker had a loud, clear-cut, incisive voice, and during his entire thesis he never for the merest fraction of a second hesitated over the pronunciation, nor did his tongue vary in the smallest possible degree from precision of movement. Of course, these papers are so scientific that they can be appreciated and discussed by only a few. At the same time, they carry with them a thought which can be easily assimilated, and from which the hearer gains new views into the physicochemical activities of the human body.

A man of this type sometimes discourages the less ambitious man or the man who thinks himself unequal to the task of public reading and public speaking; but one should not be discouraged, and, if doctors will learn to write and read papers that are meaty and are simply constructed, and to deliver them in a tone of voice and with an enunciation that carries to the far end of the room, our society meetings will not only increase in membership but in attendance at the meetings, which should occur at least once or twice a month. The man who reads a paper on some uninteresting topic, something that every one should know or about something that is uninstructive, should take heed of the comfort of his audience. This he very rarely does. He usually reels off something in which he alone is interested, and which has but little scientific value, thinking that he makes an impression upon his fellow medical men. Here is where he is wrong, and, if he wants to elevate his branch of medicine or to display his knowledge of the subject, he should follow a few clearly laid down lines.

This criticism is not an effort to discourage the young man who is inexperienced in public reading. It is simply something for him to think about, and to show that he recognizes the demands of his audience and presents to them something which will be worth remembering.

More medical societies have been ruined by poor papers and poor speakers than can be organized in a decade.

REHABILITATION OF THE WOUNDED

The term "reorganization and reconstruction," as it has been used in the past three or four years, is changed by Dr. Frank Billings, Chief of the Department in Washington, to the term "rehabilitation of the individual," and it really not only covers the wounded of the war, but applies equally to the cripple who is suffering either from the effects of disease or injury in civil life. We listened one afternoon at the Congress of Physicians and Surgeons to a program on "Reconstruction," so termed in the official notice of the Congress. Papers were read by very eminent men who had attained high rank in the military corps, and who were well known in this country and abroad. Dr. John M. T. Finney and Dr. W. S. Thayer, of Johns Hopkins Medical School, presented papers on the surgical and medical aspects of reconstruction. Both of these men have attained the highest rank in the service, and from their prominence and eminence they are able to speak with a degree of authority. And yet there was something lacking. They told about the organizations of camps, and hospitals and various methods of operations, medical treatment and after-care,—that is, of what they had done,—and they presented to their respective audiences what should be done hereafter. The unfortunate part of all of this reconstruction work is that it has not as yet looked into the future far enough or attempted to define or continue the work of rehabilitation. It seemed to some of the men present that they heard again of what these men had accomplished while abroad, but they heard too little of what is to be done in the future. This criticism may not be quite fair to the effort of the Government, because it is necessary to restrict the number of rehabilitation hospitals, and if it is possible to keep up courage and activities of the individual, as well as of the instructor, all will be satisfactory; but, if this is not done, then we shall have on our hands the crippled and deformed for many years to come, and the work so well inaugurated will not be continued with the same enthusiasm. Dr. Harvey Cushing, of the Harvard Medical School, and Dr. Pearce Bailey, of New York, delivered addresses on the neurological aspects of reconstruction, one from the neurosurgical aspect and the other from the neuropsychiatric side.

One of the interesting papers presented was by Dr. A. E. Cohn, of the Rockefeller Institute, of New York City, on the cardiac phase of war neuroses; and at the end of his paper it was quite evident that he considered the majority of his heart cases were neuroses, thus emphasizing the need of the neurologist and the psychiatrist. In fact, all through the program on rehabilitation the medical and surgical men re-iterated their praise of and thanks to the man in neurology and

psychiatry, thus bringing all into closer relationship, as we have said before, emphasizing the necessity of teamwork directed mainly by the neuropsychiatrist.

Of course, most of the papers at the general meetings and in a few of the Sections were mainly on war topics, but much of interest was brought out, even though some of it seemed a little trite and perhaps had been gone over before in medical journals and in the public press. At all events, the doctors and the public are getting education in what war-work has meant not only to the men abroad, but to those who were obliged to remain at home and do work in the camps of the United States. Too great praise cannot be given the men who have engaged in this particular work of rehabilitation. It has embraced all of the well-known, as well as the smaller, fields in medicine and surgery, and has left its imprint upon the medical men throughout the entire world. Now, if we can, by concerted action and re-iteration, make known the needs of the wounded and crippled, there will be comparatively few disabled men after the period of rehabilitation is over. This will require great sacrifice on the part of men who are still in service and still in charge of rehabilitation hospitals and training schools.

One phase of the rehabilitation work has brought out the deficiency of many of the enlisted men, and large numbers of men who have been in service have been recognized as improper cases for work in war.

Statistics show that 700,000 illiterates of draft age are prominent witnesses of the neglect of education in childhood. This darkened mental condition is paralleled by an equally serious physical condition. Of the 2,510,706 men examined in the draft, 730,756 were rejected for physical defects, many of which would have been preventable if attended to in childhood. Consequently, the chief work of rehabilitation begins, primarily, with the suitable father and mother, and, secondarily, with the training of the child at home, and finally by the education of the child in the school with all of its physical exercise, the instruction in the minor fundamentals, and in the instruction in the various crafts which are found in all up-to-date schoolrooms. Reports from the Children's Bureau show that 300,000 infants die every year, and these deaths are largely preventable; consequently, children's age and children's training are the nation's asset.

CLASSIFICATION OF REJECTIONS

From the records in Washington, including those from February 10, 1918, to May 1, 1919, there has been an appalling number of rejections for the important specialties, and the number recorded is 467,694, and of these, diseases of the eye, ear, nose, and throat numbered 78,089, or 17.7 per cent of the total number. Diseases of the bones and joints numbered 75,831, or 16.2 per cent. Diseases of the heart and blood-vessels, 61,142, or 13 per cent. Nervous and mental diseases, 58,464, or 12.5 per cent. As a sub-heading under nervous and mental the alcoholics and drug addicts showed a surprisingly small number, 2,007, or 0.43 per cent. Among the distinctly nervous and mental were 23,728, or 5 per cent; and of the mental deficiencies there were 24,514, or 5.2 per cent; and of the thyroid cases, there were 8,215, or 1.7 per cent, numbering in all 48,000 approximately, afterwards extended to 67,417. These figures may be at swords' points, as it were, and do not total up as one may expect, but, when one considers the enormous number under classification, a few thousand out of the way is not very important.

Among the cases discovered and classified, 72 per cent were found before they were three months in service, and of these neuropsychiatric cases 2,000 were sent from the American Expeditionary Forces in France, which included 1,000 insane. A rather peculiar situation has developed in which the Bureau at Washington and the New York Health Commission vary greatly in their attitude. It refers to the alcoholic and the drug addict. It is claimed by the public press that there are 1,500,000 addicts. This is sharply contradicted by the Washington Bureau in its final estimate of the number. Part of this is due to the fact that the largest number of addicts come from New York City, and go through Camp Upton; and the statistician of New York classifying the addict cases believes that a large number of addicts are unrecorded, because they were primarily rejected by the Local Boards as unsuitable cases. The surprisingly small number recorded in Washington is probably due to the fact that most of these men were combed out of the service before they were finally enrolled. Then, too, a surprisingly small number of epileptics developed in the records at Washington, 6,257 out of a total classified list of 67,417. It seems likely that the Local and Advisory Boards discovered the epileptic early in his enlistment, and threw him out on account of his disorder.

In spite of the efforts of these Local and Advisory Boards, a large number of psychoneurotics got into the camps, and from there were sent abroad. For instance, up to February 1, 1919, 10,041 psychoneuroses and 7,303 psychoses were detected in the records at Washington, and of the chronic psychoneurotic states, which included the incompetent, there were 5,091. It was found that there was a large number of morons among the neuropsychiatric cases. This includes the classification up to May 1 of this year, and not belonging to the American Expeditionary Forces. Dr. Pearce Bailey stated that the number of morons was 80 per cent of the incompetents, and of this large number the degree of defect not determined was 919, and among the distinctly imbecile type there were 6,817; of the moron type, 13,242; and of the border-line type, 808. It is seen here that the necessity of examination of the children in the schools is again the first thing that should be undertaken; and out of this examination many defects of eye, ear, nose, and throat, bone and joint diseases, heart and blood-vessel disorders, and defective mental and nervous states, will be attended to, eliminated, or cured. Had this been done, many needless enlistments and much unnecessary expense would have been avoided.

Again, our attention is called to the number of organic nervous diseases and of injuries to the nervous system, amounting to 11,776, who went through the Local Boards without being discovered. This can be readily explained on the ground that the rapid enlistment and the necessity of men for immediate work were responsible for this large number entering the service undetected and evidently not passing through the hands of the neuropsychiatric examiner.

SUGGESTED PERSONAL INJURY CASES AND THE EXPERT

Those of us who testify in court on personal-injury cases regardless of the outcome of the cases and the award of damages, will either be greatly satisfied as to our testimony or equally greatly disappointed. Incidentally, there will be a small number of experts willing to testify to the permanent injuries which accompany minor bruises and injuries. Undoubtedly, there are numerous cases of what seems to be a permanent injury due wholly to suggestion, and this suggestion comes to the patient through some sympathizing friend—the fear which is an inherent element in all of us or the gratituous and unwise suggestion made by the first examining physician or surgeon. When one considers the hundreds of thousands of soldiers who were bumped, bruised, knocked about by the incidental conditions in warfare, including those who suffered minor injuries from the missiles of the enemy, the caving in of trench walls, the concussion of big missiles landing in a near territory in which the soldier was tumbled about from air-concussion, or from the incidental crowding of men in flight or in action, the expert will have an opportunity to direct the attention of counsel for the plaintiff or defense to these possibilities, and to show that the innumerable persons injured in warfare, who were under military direction, were not permitted to develop a suggestible state of injury.

Most of the men who were injured in this manner were not permitted by the medical staff to develop a line of suggestive symptoms. The patient was assured that his injuries were trifling, that his recovery would be prompt, and that he would be sent back to his line of action in the shortest possible time. Then, too, the morale of the fighting men was kept up to such a high standard that, if the injured man complained long and loud of his injuries, he was bluffed out of his supposed state by his comrades, and he was encouraged by them either by suggestion or example to make light of his own case, and when he was back of the lines he found that his recovery was satisfactory.

This condition cannot prevail in civil life after an injury of a similar type. The injured man will be immediately surrounded by fellows who, as a rule, will furnish him with all the suggestions he requires to develop, not only a state of mind, but a chain of symptoms. This is because he is not under military rule or surrounded by men of experience and men who were willing and brave enough to overlook their injuries and who were determined to do their duty. In the face of all these numerous injuries on the field of battle, the doctor who poses as an expert will have to consider the proposition outlined above; and under such circumstances will he be willing to swear that a minor injury produces a permanent result in all of the cases that he is called upon to examine? Perhaps the expert in the future will be a better expert, an honest expert, and take more carefully into his line of testimony the real idea of suggestion for good rather than for evil. If this statement be true, the expert will be honest enough to quote the army records of prompt recoveries before he testifies that a trivial injury,

a bump either on the buttocks, the back, or the head, is not commonly followed by recovery, prompt and complete, under proper environment.

BOOK NOTICES

CLINICAL MICROSCOPY AND CHEMISTRY. By F. A. McJunkin, M.D., Professor of Pathology in the Marquette University School of Medicine; formerly an Assistant in the Pathological Laboratory of the Boston City Hospital. Octavo volume of 470 pages with 131 illustrations. Philadelphia and London: W. B. Saunders Company, 1919. Cloth, $3.50.

This book is a résumé of the routine and special methods of analysis as carried on in a well-regulated and completely organized hospital clinical laboratory. As the author says in the preface, the book is not an "encylopedic tabulation of a great number of technical procedures," but is a concise citation of such definite and practical usages as have proved of value in the author's experience.

Besides the usual procedures found in an ordinary clinical work or clinical microscopy there are clean-cut descriptions of serological methods, including the complement-fixation test; autopsy technic; preparation of tissues for sectioning and staining; and the newer blood and urine chemical determinations.

A pleasing feature of the book is its brevity and conciseness, evidently based on practical experience from the standpoint of the author.

—C. R. DRAKE.

MEDICAL CLINICS OF NORTH AMERICA, Vol. II, No. 1, July, 1918. New York Number. W. B. Saunders Company, Bi-monthly, $10 per year.

It has been remarked before, in review of previous numbers of this series of medical clinics, that the inclusion of articles which are not strictly reports of clinics has added materially to their value. This is true of the present number. The contribution of Dr. Murray H. Staff on the "Cutaneous Manifestations of Acute Rheumatic Fever in Children," that by Dr. Oscar M. Schloff on "Acetone Body Acidosis in Children," and one on the "Relation of Pulmonary Tuberculosis to General Practice" by Dr. Charles D. Slade, as well as a very timely and up-to-date review of the situation as regards "Practical Immunization Against Diphtheria" by Dr. Wm. H. Parks, are of notable consistency.

In view of the present-day partial information in regard to high blood-pressure, the clinical lecture on "Hyperpiesia" by Dr. Frank S. Meara is read with particular interest. Dr. Walter L. Niles, of Bellevue, reports a clinic on "Subacute Non-Tubercular Pulmonary Infections," a subject deserving great consideration and treated by him with skill.

One of the best clinics of the really classical sort is that of Dr. Thomas F. Reilly, of Fordham Hospital, on "The Minor and Misleading Early Symptoms of Disease in the Heart and Circulation."

The reviewer also read with great interest the report of the clinic of Dr. R. G. Snyder, of the City Hospital of New York, who discusses three unusual cases of aneurysm of the thoracic aorta. It is peculiarly well-discussed from the point of differential diagnosis from thoracic tumor of different sorts. The clinical conditions characterized by "Obstructive Jaundice," illustrated in a clinic by Dr. Burrill B. Crohn, of Mt. Sinai Hospital, is also most instructive. "The Primary Myopathies and Their Endocrine Relationships" by Goodhart, of Montefiore Hospital, and "A Survey of the Hemorrhagic Diseases, With Especial Reference to Blood Findings," by Ottenberg, of Mt. Sinai, also repay careful perusal.

The promise of the earlier numbers of this excellent series of clinics is being fulfilled as each succeeding volume comes to hand.

It is gratifying to the internist to know that there is a demand for this high-class work.

—J. G. CROSS.

NEWS ITEMS

Dr. W. O. Tessier has moved from Red Lake Falls to Oklee.

Dr. J. D. Fuller has moved from Plaza, N. D., to East Ellsworth, Wis.

Dr. R. S. Forbes, of West Duluth, has returned from army service.

Dr. H. O. Ruud has moved from Bismarck, N. D., to Alexandria, Minn.

Dr. A. M. Fisher has moved from Bismarck, N. D., to Ft. Keogh, Montana.

Dr. F. M. Mahin has moved from Lake Preston, S. D., to David City, Iowa.

Dr. Walter E. White has moved from Harvard Lake, Minn., to Ipswich, S. D.

Dr. H. W. Froehlich, of Thief River Falls, is in New York doing postgraduate work.

It is announced that the Fort Snelling (Minn.) Hospital is to be demobilized on August 1.

Dr. W. A. Delaney, of Mitchell, S. D., has returned from France, and resumed practice.

Dr. L. H. Bussen, U. of Minn., '02, formerly of Richmond (Minn), has located at Swanville.

Dr. Howard Lankester, of St. Paul, is planning to spend some months in Louisville, Ky., with his son.

Dr. W. G. Magee, of Watertown, S. D., has been doing postgraduate work in surgery in Chicago.

The Sioux Falls (S. D.) Lutheran Hospital graduated ten nurses from its training school last month.

The training school of the Rochester State Hospital graduated a class of seventeen nurses last week.

Dr. Emma M. Ackerman has moved from Bis-

marck, N. D., to West Point, Neb., but has not located there.

Dr. Arthur Bremken, of Pine River, has been in Chicago taking a course in eye, ear, nose, and throat work.

Dr. Henry O. Ruud, of Alexandria, was married last month to Miss Ruthella Grace, of Bismarck, N. D.

St. Barnabas Hospital, of Minneapolis, graduated a class of thirteen nurses from the training school last month.

Dr. R. C. Lounsberry, of Marshalltown, Iowa, has been appointed physical director of the St. Paul Y. M. C. A.

Dr. W. J. Cochrane has moved from Lake City to Minneapolis. Dr. Cochrane is an eye, ear, nose, and throat specialist.

A site has been purchased for the A. M. Miller Hospital to be built in Duluth with the $600,000 left to the city by Mr. Miller.

Dr. J. D. Budd, of Duluth, has been elected department commander for the state of the Grand Army of the Republic.

Dr. George I. Badeaux, who has been associated for a year or more with Dr. J. A. Thabes, of Brainerd, has located at Ironton.

Dr. J. T. Litchfield, of Minneapolis, has returned from army service. Dr. Litchfield was in the navy and on the Hospital Ship Solace.

Dr. C. C. Tyrrell, of Minneapolis, who served on the Hospital Ship Solace with Dr. Litchfield, also of Minneapolis, has resumed his practice.

Dr. Emma B. Ackerman, house physician of the Bismarck (N. D.) Hospital, will take an extended course of postgraduate work in Chicago.

Dr. P. M. Hall, superintendent of the State Tuberculosis Sanatorium at Walker, is taking a course in the School of Tuberculosis at Saranac, N. Y.

Dr. T. H. Dedolph, of St. Paul, who was in France nearly a year and a half, is assisting Dr. F. W. Maercklein, of Oakes, S. D., in his hospital work.

Dr. A. D. Haskell, of Alexandria, has taken Dr. R. E. Swanson into partnership. Dr. Swanson has been assisting Dr. Haskell for the past year.

Dr. C. L. Lick, who has just completed his interneship at the City and County Hospital of St. Paul, has been appointed police surgeon for the City of St. Paul.

Capt. A. S. Hamilton, of Minneapolis, still in the service and located at the Walter Reed Reconstruction Hospital in Washington, D. C., has been made a major.

Of 5,000 school children examined by a county nurse in Renville County, 4,095 revealed some defects. One child was blind in one eye, and the child's mother did not know it.

Dr. H. V. Hanson, of New London, has gone to Chicago to do postgraduate work, and will then take a position on the staff of the St. Paul City and County Hospital until fall.

Dr. Alfred W. Adsit, of Hastings, died last month at the age of 62. Dr. Adsit graduated from the Columbus (O.) Medical College in 1881, and had practiced many years in Hastings.

Dr. H. J. Rowe, of Casselton, N. D., for many years secretary of the North Dakota State Medical Association, has been selected to take charge of the North Dakota Soldiers' Home at Lisbon.

Dr. William H. Lane, of Miller, S. D., died last month after a long illness. Dr. Miller graduated from Bellevue Hospital Medical College in '82, and had practiced in Miller for many years.

Dr. V. S. Cabot, of Minneapolis, who recently returned from France, is in Chicago doing postgraduate work. He will resume practice in this city upon his return from Chicago at an early day.

Dr. Paul F. Brown, 1101 Metropolitan Bank Building, Minneapolis, has returned from France after serving two years. Dr. Brown entered the service as a lieutenant and attained the rank of major.

Dr. Richard Cranmer, of Minneapolis, who has been in France for the past eighteen months with Camp Hospital No. 15, has returned, and now occupies his old office in the Syndicate building.

Dr. E. E. Buell, a dentist of Detroit (Minn.), who held the rank of major in the army service, has been made chief of the Dental Department of the U. S. Public Health Service, with sixty hospitals under his charge.

Eighty-eight physicians received licenses last month to practice in Minnesota. Of this number 66 were graduates of this year's class in the Medical School of the University of Minnesota; and 26 received certificates by reciprocity.

Dr. C. H. Pelton, of St. Paul, recently returned from army service, succeeds Dr. D. B. Rice as assistant superintendent of the City and County

Hospital of St. Paul. Dr. Rice resigned to take up postgraduate work in internal medicine.

Dr. J. M. A. Gravelle, of St. Paul, who recently shot his wife, has been declared insane by a commission of St. Paul alienists of unquestioned ability and integrity,—Drs. C. Eugene Riggs, Haldor Sneve, and Arthur Sweeney.

The South Dakota Association of Trained Nurses met in annual convention at Aberdeen, S. D. Resolutions were adopted requesting that army nurses be given official rank up to that of major. The Association will meet at Mitchell next year.

Dr. A. F. Kilbourne celebrated, on June 7, the thirtieth anniversary of his connection with the Rochester State Hospital as superintendent. Dr. Kilbourne was assistant superintendent of the St. Peter Hospital for five years before going to Rochester.

The "Allied Medical Association of America" has been holding its annual meeting in New York City. The only news thus far received from the "Allies" is that they are in favor of beer and light wine. So are some other people, but the latter are not in the majority.

Dr. Franklin Martin, of Chicago, announces that 40,000 civilian medical men were mobilized as officers in the army and navy and public-health service, and 72,000 medical men and women in the volunteer medical service corps. This gives a total of 112,000 medical men and women who tendered their services to the country.

The registrations at the recent A. M. A. meeting at Atlantic City from four Northwestern states were as follows: from Minnesota, 76; from Montana, 5; from North Dakota, 5; from South Dakota, 6,—a total of 92. Of the Minnesota registrants, Minneapolis sent 37; Rochester, 17; St. Paul, 6; and Duluth, 3; leaving 13 from other places in the state.

The forty-first annual meeting of the Medical Association of Montana will be held in Missoula on July 9 and 10. Papers will be presented by the following men outside of Montana: Drs. E. S. Judd and E. C. Rosenow, of the Mayo Clinic, Rochester, Minn.; Dr. O. T. Batchellor, Spokane, Washington; Dr. S. W. Mowers, Seattle, Washington; Dr. C. E. Seashore, Iowa City, Iowa; and Dr. R. C. Coffey, Portland, Oregon.

The Ramsey County Medical Society gave a banquet, last week, at the Minnesota Club, to its members returned from army service. Dr. E. W. Buckley acted as toastmaster. Dr. Haldor Sneve gave the address of welcome, and Dr. W. A. Dennis responded on behalf of the returned medical officers. Ninety members of the Society were in the service, one of whom was a woman, Dr. Nellie Barsness. Two died while on duty,—Dr. H. C. McIntosh and Dr. Otto Winter.

The health officers of Montana hold a meeting in Missoula on July 7 and 8. A number of distinguished public-health men from various parts of the country will be present to take part in the meeting; among them are Dr. A. J. McLaughlin, of the U. S. Public Health Service; Dr. S. J. Crumbine, of the Kansas State Board of Health, and Dr. W. A. Evans, the distinguished writer on health topics for the *Chicago Tribune* and other daily papers.

Dr. Hugh F. McGaughey, of Winona, died on June 20 at the age of 46. Dr. McGaughey was graduated from the College of Physicians and Surgeons of Columbia University in 1896, and came at once to Minnesota to begin his practice. He has been prominent in medical circles ever since. He entered the army medical service early in the war, but soon suffered a breakdown. He went to the state of Washington two weeks ago, and died suddenly.

As this issue goes to press, word reaches us that the midsummer meeting of the Southern Minnesota Medical Association, at Rochester, was a great success, and that the attendance was large in spite of almost impassable roads, which, of course, cut off automobiles to a considerable extent. In addition to the attraction of the Mayo Clinic, distinguished men from outside the state and abroad gave addresses of great value. The entertainment of the members and guests could not have been excelled.

The summer meeting of the Sioux Valley (S. D.) Medical Association will be held at Sioux Falls, Wednesday and Thursday, July 16 and 17. Owing to the recent death of the secretary, Dr. Browning, it is impossible to give the details of the program at this time, but the program will be issued in ample time. The forenoon of the first day will be occupied with clinics. The scientific and business session will follow in the afternoon and on the morning of the second day. Headquarters will be at the Cataract Hotel, where the meeting will be held, and where the banquet will be served the evening of the first day. A number of excellent papers will be read by men from the adjoining states of Minnesota, Iowa, Nebraska, and South Dakota. A large attendance is expected. A most cordial invita-

tion is extended to the profession generally by the president, Dr. J. G. Parsons.

The following Minnesota men presented papers at the recent meeting of the American Medical Association, and its component associations and societies, which met at the same time in Atlantic City; some of whom presented more than one paper: Dr. H. S. Plummer, Rochester; Dr. J. C. Litzenberg, Minneapolis; Dr. R. E. Farr, Minneapolis, Dr. D. C. Balfour, Rochester; Dr. J. P. Sedgwick, Minneapolis; Dr. L. M. Crafts, Minneapolis; Dr. H. G. Irvine, Minneapolis; Dr. H. E. Michelson, Minneapolis; Dr. W. J. Mayo, Rochester; Dr. W. F. Braasch, Rochester; Dr. Emil S. Geist, Minneapolis; Dr. R. D. Carman, Rochester; Dr. C. H. Mayo, Rochester; Dr. M. S. Henderson, Rochester; Dr. E. C. Rosenow, Rochester; Capt. A. S. Hamilton, Minneapolis; Dr. Fred L. Adair, Minneapolis; Dr. E. C. Kendall, Rochester; Dr. L. B. Wilson, Rochester; Dr. A. D. Hirschfelder, Minneapolis; Dr. W. Moore, Minneapolis; Dr. H. E. Robertson, Minneapolis; Dr. H. Z. Giffin, Rochester; and Dr. W. C. MacCarty, Rochester.

PUBLISHER'S DEPARTMENT

THE REMOVAL OF SUPERFLUOUS HAIR

A so-called man's beard, or even a few superfluous hairs, on a woman's face are so disfiguring as to cause many a woman almost lifelong regret, if not grief. Now, how many physicians know that such hairs can be removed almost painlessly and certainly permanently? It cannot be done by pastes or caustics of any kind. It can be done with electric needles. An electrically charged needle is inserted into the root of each hair that hair disappears forever and a day.

Ella Louise Keller, at 447-8 Loeb Arcade, Minneapolis, does this work, and is thoroughly dependable.

A HIGH-GRADE 7 PER CENT STOCK

The Northern States Power Co., a division of the Minneapolis General Electric Co., offers probably the most attractive stock that has been put on the Northwestern market for many years. This stock is issued as capital to extend a well-established business, that of making and distributing electricity for power and light. Dividends are paid quarterly, and the stock is marketable at any time if one must sell.

This stock commends itself to both large and small investors, and is just the thing for physicians. For detailed information address the Northern States Power Co., 15 South Fifth St., Minneapolis.

OCONOMOWOC HEALTH RESORT

If a specialist in nervous and mild mental diseases should ask us for pointers how to build and conduct a sanatorium for his patients, we could give him no better advice than to tell him to go to Oconomowoc and see what Dr. Arthur W. Rogers is doing, and has been doing for many years, in this line, for Dr. Rogers is an expert. He may not be able to *tell* you in a few words how it is done, but he can *show* you in his institution that it has been done.

The same information is equally useful to the general practitioner who has a patient needing such treatment and care. Go to Oconomowoc.

THE NORTHWESTERN HOSPITAL OF MINNEAPOLIS

The Northwestern Hospital has long been considered one of the best conducted of the large hospitals of the Northwest. Its medical staff is unsurpassed, being composed of the best men in the medical profession of Minneapolis; and its general conduct, outside of medical matters, is in the hands of women of high character who are leaders in both social and charitable circles in the city.

This hospital's standing in the community is best attested by the large amount of funds contributed to erect and enlarge its buildings and to enable it to maintain a service which greatly exceeds its cost in earnings.

Miss A. Jeanette Christianson has long been its superintendent, and her management has the commendation of both its staff and its board of directors. Miss Christianson is always glad to give physicians and others all the information they may seek concerning the hospital's policies and its workings.

DR. CREWE'S SANITARIUMS

Dr. J. E. Crewe is conducting at Rochester, Minn., a sanitarium for the tuberculous and one for chronic diseases of metabolism, in the latter of which special attention is given to the milk diet treatment.

Although these two institutions are in no wise connected, the work done in one by the medical men and assistants is helpful, through the director, to the attendants in the other, for the patients of each demand for their cure the same, or very similar, intensive dietetic treatment.

Dr. Crewe and his assistants are doing a valuable work, and they have the confidence of their fellow practitioners in that great medical center. We highly commend their work.

SHARP & SMITH OF CHICAGO

For sixty years the house of Sharp & Smith of Chicago has held high rank as manufacturers and importers of high-grade surgical instruments; and this house has manufactured some of the best surgical instruments and appliances ever given the profession. Such, for instance, is the firm's improved stethoscope, invented by De Lee-Hillis.

The surgeon who depends upon Messrs. Sharp & Smith for his surgical instruments and appliances will never be disappointed in the quality of what he buys from them.

Their catalogue will be gladly sent to any physician or surgeon asking for it. The home of Messrs. Sharp & Smith is 65 East Lake Street (two doors from Randolph Street), Chicago.

THE WEIGHT OF EVIDENCE

If professional endorsement of the therapeutic efficacy of a remedy by men of recognized reputation, further supported by a successful existence of over a quarter of a century, counts for anything, it must then be logical to presume that such a product is worthy of a trial in conditions where it is clinically indicated.

No greater an authority upon gynecological diseases than Sims could be quoted, and from the fact that he prescribed and recommended the use of Hayden's Viburnum Compound in certain gynecological and obstretical conditions, is weighty evidence of its therapeutic efficiency and reputation which it enjoyed with the older members in the profession.

That it has continued to serve as a satisfactory remedy since the time of Sims, in the treatment of dysmenorrhea, menorrhagia, metrorrhagia, threatened abortion, rigid os, etc., its increasing popularity with the profession indicates which should warrant it worthy of a trial in these diseases, when they are presented to you.

To those physicians not familiar with the genuine H. V. C., as originated by Dr. Wm. R. Hayden, a sample with formula and literature will be forwarded upon request to the New York Pharmaceutical Company, Bedford Springs, Bedford, Mass.

GRAND VIEW HEALTH RESORT OF WAUKESHA, WISCONSIN

The necessity for adding a third story to the present large building at the Waukesha Resort, is evidence of the success of the Moon (Mud) Bath treatment as practiced for many years in this pleasant resort. Such

an addition will be made at once in spite of the high prices for building.

The new story will be an "addition" de luxe. Every room will have a private bath, either shower or tub, and will be made so attractive that its "atmosphere" will be a part of the cure, next in value to the baths.

This will be a great addition to this already attractive resort, and will be well worth many a visit from the northwestern business man who is "run down," whether from a seen or an unseen cause.

DOCTORS' CREDIT BUREAU

The Doctors' Credit Bureau (254 Security Building) is doing for medical men just what the Retail Merchants' Credit Bureau is doing for retail merchants: it is telling them where it is unsafe to contract bills and to let bills stand until they become practically uncollectible.

This bureau also collects physicians' accounts; and few men who are able to pay their bills want to get in bad with this bureau, for they know it means a hard day of reckoning.

Such a bureau is of great benefit to doctors; and, besides saving a doctor much money, it serves to inform him when he is doing more than his share of charity work.

Ask the bureau for details of its work.

CONQUERING HAY FEVER

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SYMPOSIUM ON FOCAL INFECTIONS*

T. D. HARTZELL, M. D., D. D. S., DOUGLAS WOOD, M. D., E. H. PARKER, M. D., H. L. ULRICH, M. D.

FACTORS TO BE CONSIDERED IN THE CONSERVATION OR EXTRACTION OF INFECTED TEETH

BY T. D. HARTZELL, M. D., D. D. S.
MINNEAPOLIS

I am going to lay a brief clinical background for remarks I want to make.

The necessity for the removal of teeth that are infected has been brought home in a variety of ways in the last four or five years. I suppose there is a greater lesson in the statistics regarding heart disease than in almost any other single branch of statistics gathered by the Bureau of Vital Statistics in Washington, as they reported in the year 1916 that 114,000 people died of myocarditis and endocarditis in the registration area. During that same year there died 102,000 people from tuberculosis. In the year prior the death-rate from heart-inflammations was 102,202, running about even with tuberculosis.

Now, where did this heart trouble principally arise? Chiefly from the mouth. The great majority of cases that I have had the opportunity to observe on the post-mortem table and by cultures afterwards have been endocarditis of streptococcal origin. Where does the streptococcus occur most prolifically in the whole body? On the tooth surfaces by many, many times more than at any other single place in the body. The tooth surfaces or tooth necks measure at the gum margin 30 to 32 inches, and the tooth surfaces bear bacterial growth on every iota of the surface that is not polished at least once a day until it shines. By scraping off growth on tooth surfaces and diluting it, weighing it and counting the bacteria in the diluted fluid, we find that in the cleanest mouths the bacterial growth on tooth surfaces will run 8 to 9 millions per milligram of tooth-scrapings; in a dirty mouth that is uncleansed, untouched by cleansing apparatus of any sort, the micro-organisms will run from 800 to 900 millions to the milligram, according to Gies and Kliger, writing in the *Journal of the Allied Sciences.*

A very fine piece of research work done by Blavatsky of the Pasteur Institute some years ago showed that the streptococcus makes its appearance in the mouth about the sixth hour. It is practically the only inhabitant of the mouth until the teeth erupt except occasional accidental visitants. The growth of tooth surfaces aside from streptococci is one-fifth staphylococci; and you have 50 per cent streptococci and 20 per cent staphylococci, which makes 70 per cent of the total amount of growth composed of these two

* Presented at the second annual meeting of Minneapolis Clinic Week, May 9, 1919.

families. The balance of the mouth growths, roughly speaking, are fusiform bacilli, pneumococci, and thread forms, and occasional visitants of other types.

So it will readily be appreciated that the organisms of most import are the streptococcus, the staphylococcus, and the pneumococcus. The pneumococcus appears in fully 40 per cent of the mouth examinations. The only other micro-organism of very great importance is the fusiform bacillus, which is universally found with its relapsing form, the spirocheta. I know in all the literature of only six recorded deaths from blood infection by the fusiform bacillus, but we know of many, many blood infections by the other micro-organisms mentioned.

Now, what is the practical method of defending the body against this great mass of bacteria which doubles under ordinary conditions every thirty minutes? It is tooth-cleansing. If there is any single thing that has been shown in our hospital work at the University of Minnesota it is this, that you can take a tooth-brush, and, if you use it intelligently, you can cut down the bleeding gums and the pus flow in the average mouth to at least one-fourth the amount it was before, so far as pus is concerned, in ten days' time. You can almost entirely overcome in a week the inflammation that makes the gums bleed; that is our average experience. The cases where bleeding of the gums will not entirely cease are those where the tooth surfaces bear hard calcific deposits.

The statistics that have been gathered from the records of our cases in the University Hospital by Professor S. Marx White show that, in the first year in which we had this intensive mouth-cleansing going on in the Hospital systematically, we made the Hospital 12 per cent more efficient than it had been the year before, and that percentage has steadily increased. We have a nurse whose duty it is to see that each patient intensively cleanses his teeth.

How are we going to decide whether we are going to extract or conserve teeth? There ought to be three or four things taken into consideration.

First, are the teeth in question badly diseased, are the tissues about the teeth badly diseased? Are the root canals properly filled? It is just as possible to do sterile root-canal work today as it is to do sterile abdominal work or sterile work on the eye. The fault of the dental profession has been in times past that they did not have this sterile technic. You all know that it takes training to develop an aseptic technic. The dentist has not possessed such a technic, and when he has done root surgery he has done it in a faulty manner, and he has planted an abscess. Another way of planting an abscess is to allow this heavy mass of growth on the tooth neck to penetrate around the neck of the tooth, and destroy the tissues there, and make an open door to the lymph-vessels and veins, permitting bacterial masses to penetrate into the circulation and carry the infection along the blood-stream and plant abscesses.

This being the case, if you are going to decide whether to extract a tooth or not, you should decide first as to whether the tooth can be kept clean. If the sides of that tooth are brilliant and glistening, and the gum margin intact, and the patient is able to take care of the mouth, then that tooth need not be extracted. If the root canal is imperfectly filled, and there is an abscess at the root tip, and the patient is in a low degree of vitality, then the tooth should be extracted.

It is not right to say that every tooth that has a devitalized pulp must be extracted, and draw the line strictly on the devitalization. There is apparently great variation in the vital resistance of people. If the pulp chamber be sterile that tooth will live, and do service during a lifetime and not be a menace to health, especially if the tooth surface is intact and the gum margin is clothed with an unbroken epithelium. On the contrary, if the bacteria are going down through the diseased gum and into the veins, and then into the circulation and around the tooth or through the root canal, then the tooth ought to be extracted.

There is one other consideration in regard to the extraction of teeth, and it is this: If the blood-stream shows five million red cells to the centimeter, if the hemoglobin is normal or anywhere near normal, one can remove the pulps or do pyorrhea treatment and safely retain the teeth in use. If the vitality be lowered and you have a secondary anemia and leukopenia, or a very marked leukocytosis with indications of bacteriemia, then the teeth ought to be extracted, particularly if the urine shows casts or albumin.

These are the simple rules to observe in determining whether to extract or preserve the teeth. With a clean mouth, healthy gum, freedom from infection in the root, and a normal blood-stream and normal kidney,—you can do anything with that kind of a mouth; with the opposite picture one would better extract teeth.

(Lantern slides were shown, with explanations, by Dr. Hartzell.)

FOR DISCUSSION SEE PAGE 370

FOCAL INFECTION IN RELATION TO THE EYE AND EAR

By Douglas Wood, M. D.
MINNEAPOLIS

This is a very broad subject, and it can be dealt with only in a very superficial and general way in the alloted time.

It has been only within the last few years that focal infection has been considered seriously in the medical profession; and the more we study the relation of our special subject to general and local conditions in other parts of the body, the more we realize the necessity for a general understanding of physiology, pathology, bacteriology, and general diagnosis, and we feel that we are no longer ophthalmologists and otologists, but, rather, physicians and surgeons working in the fields of ophthalmology and otology.

This is the day of focal infection, and to obtain results we must find these foci and remove them. To do this successfully there must be co-operation among the different branches of the profession.

The question of inflammations of the eye due to the so-termed "auto-intoxication" from intestinal origin, is still in dispute.

Billings believes that the pathogenic mircro-organism in the intestinal canal remains there as an infectious organism gaining entrance to the bowel chiefly by swallowing infectious material from the mouth, nose, and throat or through infected drink and food. This infection is carried by the lymph- and blood-stream to the eye and other parts of the body. Dr. de Schweinitz discredits the so-called gastro-intestinal auto-intoxication in relation to these affections, and he believes that the dependence of uveitis upon gout, etc., is not so generally admitted as formerly, and that diabetes is only occasionally associated with the disease.

Tuberculosis and syphilis of the eye are generally secondary infections, except in cases of the conjunctiva and lids, where they may be primary. Gonorrhea of the conjunctiva is generally due to direct infection, though metastatic gonorrheal conjunctivities is of endogenous origin, and is generally seen in adults following acute urethritis, often associated with gonorrhea, rheumatism, and gleet.

This metastatic form is assumed to be due to the toxic production of the organism, as the gonococcus cannot be found in the conjunctival sac or discharge.

The so-called gouty and rheumatic conjunctivitis is endogenous, and generally occurs during or following a disturbance in some of the joints or perhaps after a tonsillitis. Many of these cases are seen to clear up after a tonsillectomy, removal of abscessed teeth, or operation on a chronic antrum.

How often we see a marginal blepharitis associated with a low grade of conjunctivitis! The patient gives a history of tonsil trouble with slight elevation of the evening temperature. The urine shows a trace of albumin, a few casts, and perhaps a few blood-cells. These symptoms all disappear upon removal of the tonsils or drainage of a chronic antrum.

Phlyctenular conjunctivitis and keratitis superficialis eczemotosis so closely associated with hypertrophied tonsils and adenoids, pyorrhea, bad teeth, enlarged glands, bowel trouble, anemia, etc., the old doctor's sclerosis picture, invariably get well as soon as these foci are removed.

Herpes of the lid, conjunctiva, and cornea, known to be due to inflammation of the trigeminus or of the Gasserian ganglion, is unquestionably due to focal infection in some instances, according to Rosenow.

Anterior scleritis and sclerokeratitis are often secondary to tubercular infection in the lung, but may be due to other forms of infection in other parts of the body not necessarily tubercular. In thirteen cases at the State School for Feeble-Minded, of which four showed positive signs of tuberculosis in the lungs, these, with four others, were put on tuberculin therapy. The mouths, throats, and noses of all were cleaned by the removal of the decayed teeth, tonsils, adenoids, pyorrhea, etc. Of these eight cleaned up in a very short time; two, later; and the other three, who had marked lung trouble, lingered on. The von Pirquet test was positive in all these cases, but, unfortunately, this does not mean much in institutional children.

The uveal tract is the most common sufferer as a result of focal infection; though the conjunctiva, cornea, sclera, retina, and nerve may be involved.

Dr. de Schweinitz, in a paper before the seventeenth International Medical Congress, stated that in excluding syphilitic tuberculosis and sympathetic varieties of chronic uveitis, he believed every other case to be of septic or toxic origin.

In all cases of iridocyclitis and choroiditis a

thorough examination of the patient should be made not only for syphilis and tuberculosis, but for infections of the ear and nose, accessory sinuses, mouth, teeth, throat, and larynx, and especially including the tonsils and nasal pharynx, but also the lungs, abdomen, rectum, genito-urinary organs, and glandular system, etc.

Often more than one source of infection can be found and all should be treated accordingly. This is why we so often fail to get results.

The vascular choroid is often the seat of the so-called metastatic infection, especially seen aside from syphilis and tuberculosis following meningitis, puerperal fever, scarlet fever, pyemia, pneumonia, influenza, erysipilas, typhoid, etc.

Some of you may remember a case of tonsillectomy I operated on a year ago at the Swedish Hospital during Clinic Week. This was a man thirty-eight years old, with a history of plastic iridocyclitis in both eyes of some twenty years' standing. There were repeated attacks of iridocyclitis, generally associated with some tonsil disturbance and rheumatic symptoms. The tonsils were found to be full of a creamy pus. Since their removal and the extraction of three devitalized teeth, the man has had no recurrence of the eye inflammation, and there have been no new posterior deposits on either cornea, with quite a marked improvement in vision. This is a typical history of a so-called "rheumatic eye," which, like rheumatism, is another name for focal infection.

Uveitis, especially associated with solitary patches of exudation in the choroid and vitreous, and keratitis punctata must be considered secondary to a source of infection in some other part of the body, especially the teeth or the mucous membranes.

Faith says that, outside of injury and infection, through the tract of the injury producing secondary diseases of the retina, most inflammations of the optic nerve and retina are endogenous in origin. Syphilis, diabetes, scarlet fever, measles, etc., and sepsis are among the causes of diseases of the vessel walls either preceded or followed by the formation of thrombus.

The optic-nerve lesions, the result of diseases of the accessory sinuses of the nose, have been recognized for some time. Whether the disease is conveyed by the blood-and lymph-channels or by contiguity of structure, is still debatable. Probably both routes play a part.

The neuroretinitis of lues is only too familiar.

Invasion of the middle ear and mastoid occurs directly from the nasal pharynx or the blood-stream. Mastoiditis may be grouped in three types:

1. Cases in which otitis media symptoms predominate, and mastoid involvement is slight. These generally clear up without more of an operative measure than paracenticis.

2. Cases in which otitis media and mastoiditis appear, and develop at one and the same time. These are always serious, and generally call for quick operation.

3. Cases occurring in a systemic infection. The mastoid is involved, and becomes necrotic before any discomfort is noted by the patient. Headache is generally sudden and terrific, the drum shows no very marked reaction, and there is no pus upon opening it. This is a true invasion from the blood-stream.

CASE

C. P., aged 28—Gave a history of deafness in the right ear for many years, the result of an acute otitis media when a child, following measles. He suddenly developed a marked headache with some pain in front of the right ear. This ear was otherwise negative. The pain lasted a few hours, and then stopped. The headache persisted off and on for a few days, though not as marked as at first. He had sweats, chills, and a fever ranging above 104° over a period of a week, generally occurring about once in twenty-four hours. Later he developed jaundice. He finally developed mental symptoms and became subconscious at times. The drum showed no reaction. There was no pain or tenderness over the mastoid. All other examinations were negative. The leucocyte count was about 14,000. The abdomen was opened, and the liver and gall-gladder were found negative. The *x*-ray showed a sclerosed mastoid on the right side.

Upon opening the mastoid a perisinus subdural abscess was found.

On reviewing the histories of cases of the past year of infected eye that can be traced to focal infection, where the condition got well or was greatly improved after removal of foci, I found the following results:

Conjunctivitis and marginal blepharitis, due to abscessed teeth, 7 cases.
Infected tonsils, 5 cases.
Chronic antrums, 2 cases.
Chronic appendicitis, 1 case.
Fistula in ano, 1 case.
Anterior scleritis and sclerokeratitis.
Tuberculosis in lungs, 6 cases.
Tuberculous osteomyelitis, 1 case.
Tonsils and adenoids, 8 cases.
Tonsils, adenoids, and teeth, 6 cases.
Uvulitis-teeth, 14 cases.
Tonsils, 19 cases.
Antrum, 2 cases.

Appendicitis, 1 case.

Optic neuritis and ethmoiditis, 2 cases.

In conclusion I wish to summarize the following points:

1. Focal infections are very prevalent causes of eye disease.

2. The focus of infection is usually a chronic one, and is often in a quiescent state in so far as subjective symptoms are concerned, on account of the low virulence of the infecting organism.

3. More than one focus may have an etiological bearing on a given condition at the same time.

4. The most common locations of the disturbing foci are in the head, viz., the nose and the accessory airspaces,—mouth, teeth, throat, middle ear, and mastoid, though foci may be found in other parts of the body, particularly in connection with the mucous membranes.

5. The most common types of infection are the streptococcus-pneumococcus group, the tubercle bacillus, and the gonococcus.

6. The structures of the eye most frequently affected are those of the uveal tract.

7. While removal of local foci and relief from symptoms is often a proof of the causative element, inability to find such focus does not prove its non-existence.

FOR DISCUSSION SEE PAGE 370

THE NOSE AND THROAT IN RELATION TO FOCAL-INFECTION DISEASE

By E. H. Parker, M. D.
MINNEAPOLIS

Under ideal conditions the diagnosis of focal-infection diseases is made by the internist. The regional specialist is then required to determine the various infective foci, and, what is of greater importance; to estimate the danger of each focus of infection. The co-ordination of these findings, if skillfully made, should lead to fairly accurate conclusions. Ideal co-operation is not always available, but this should not deter one in his work. You can work alone and accomplish much.

A diagnosis of focal-infection disease is not made on one finding, but on several of a group of findings, such as—

Loss of endurance.
Loss of weight.
Anemia.
Increase of leucocytes.
Increase of mononuclear leucocytes.
Neuralgia.
Rheumatic pains.
Functional heart murmurs.
Myocardial weakness.
Albuminurea.
Few red blood corpuscles in the urine.
Increase in blood-pressure.
Slight temperature.
Etc.

Generally speaking the most numerous foci of infection are in the upper respiratory region,—tonsils, nasal sinuses, and teeth.

The tonsils cause, considering all foci, most focal-infection disease in childhood and most surely the teeth in adult life. It is no light responsibility to check up the foci of infections of the nose and throat. The dentist has a greater responsibility because of the large numbers of devitalized teeth, the frequency of apical abscesses on devitalized teeth, and the fact that the *x*-ray does not always show the infective area.

In any focal-infection case where a goodly number of devitalized teeth are present, and over 50 per cent show definite abscess, which is not infrequent, I think the only wise course to follow is to have all devitalized teeth removed.

Devitalization of teeth is a dangerous procedure, and, I think, should be done only in exceptional cases.

The diagnosis of sinus suppuration is not difficult. There must be a history of purulent discharge from one or both sides of the nose. Transillumination is a most important guide, and should be used by every internist as a matter of routine, as antrum suppuration is most common and is unusually easy to detect.

The tonsils are a source of danger if there is a history of frequent tonsillitis or quinsy, and they are more particularly dangerous if followed by rheumatic symptoms or other focal infection diseases. Enlarged cervical glands beneath the tonsils are evidence of infective tonsils. If real pus can be squeezed from the tonsils, you can be sure you have found a real danger. Small cheesy deposits are usually of little importance, yet, fre-

quently, they are a source of low-grade infection, and should be watched. A small submerged tonsil or a piece of tonsil from incomplete operation requires most careful study. Often a blind abscess is found in the tonsil during the operation, which could not be diagnosed previously. In a recent case of so-called "nervous breakdown" a pus cavity in the tonsil ruptured during operation, and squirted clear out of the mouth. It is occasionally observed that a child previously free from arthritis, has this trouble following incomplete removal of the tonsils, because, in this case, the tonsils become covered with cicatricial tissue, which favors blind abscess or, at least, poor drainage.

When should we remove infective tonsils is a question demanding good judgment. In a recent mild nephritis or slight arthritis, we remove tonsils at once. While in a case of active glomerulous nephritis or an active arthritis it is safer certainly to delay the operation until the disease is under control. A marked exacerbation often follows removal of the foci of infection; therefore we should in some cases remove one or two teeth at a time, and the tonsils at another time.

In my personal observation the most frequent cases where we are getting prompt and quite uniform results are in early cases of—

Arthritis.
Myositis.
Nephritis.
Iritis.
Neuritis.
Anemia with general debility.

The fascination of focal-infection work comes from success in the more obscure cases. A case of recurrent phlebitis, with eight or ten attacks in five months, is promptly cured by removal of a pus tonsil. A case of semicircular canal disturbance with attacks of dizziness, vomiting, and nystagmus of several years' duration, responded completely after removal of tonsils, with no history of tonsillitis previous to a mild attack which prompted the operation.

Cyclic vomiting in children has quite uniformly disappeared on removal of the tonsils and adenoids in the few cases I have had.

A recent case diagnosed as neurasthenia has responded to drainage of a chronic antrum. Several cases of asthma have responded promptly after the maxillary antrum or ethmoid suppuration was cured. Recent asthma, of course, responds more often than the chronic form.

Skin lesions of supposed rheumatic or toxic origin are being studied by skin specialists with the hopes of finding benefit, if not cure, by focal-infection removal.

Erythema nodosum quite commonly is cured.

Purpura hemorrhagica should be cured. A patient recently operated on has already improved after removal of several abscessed teeth and infective tonsils.

Eczema, in a few cases, responded satisfactorily to focal-infection removal.

In cases of psoriasis, urticaria, etc., focal-infection removal has proven of benefit to the general health of the patient, but so far my results on these skin lesions have not proven very encouraging.

The diagnosis of some focal-infection cases is self-evident, as an arthritis following in the wake of a tonsillitis. In obscure cases we may at least promise the patient that every focus of infection removed will be of certain benefit to the general health.

We frequently see a case of arthritis definitely cured by removal of tonsils, a relapse after a few months or years and find complete relief on extraction of an abscessed tooth or other focus.

Until someone finds a better explanation of pernicious anemia, we must remove foci of infection as the most sensible treatment.

There is room for all of us and there are cases for all of us in focal-infection disease. The public is becoming educated, and demanding the service. The many successes and a few brilliant results recompense one for any failures.

FOR DISCUSSION SEE PAGE 370

FURTHER REASON FOR THE REDUCTION OF FOCI IN FOCAL DISEASE

By Henry L. Ulrich, M. D.
MINNEAPOLIS

We have been considering this afternoon the results of focal infection. I would like to present to you some phases of the physiopathology of focal infections. We have considered foci as points from which bacteria are sprayed out, or are distributed into the circulation, and thus carried to various parts of the body. Around this idea the selective and mutative faculties of bacteria have been ably discussed and demonstrated by Rosenow. That has been the customary thinking; and it is quite correct, but it is not enough. Certain phenomena which I have observed, and you all have observed in cases of focal infections, which have puzzled me cannot be explained by this simple process. I wish to call your attention to another factor in this feature of the spraying of bacteria into the blood-stream which explains this heretofore inexplicable phenomenon very satisfactorily. This factor is the protein-sensitization of local areas by bacterial proteins derived from focal depots of infection.

Take the case of endocarditis following tonsillitis. It is impossible for me to believe that every time there is an acute flare up of the tonsils and a corresponding reawakening of heart symptoms there is a reimplantation of bacteria on a valve which formerly had been affected. Such a succession of reimplantations would speedily cripple the heart to such an extent that the patients would not live as long as these patients usually do. What really happens in a great many instances is a local sensitization of the tissue of the valves to protein poison with the subsequent increased clinical evidence of valvular disease. The same phenomenon of sensitization may attack the myocardium or the neurogenic tissue giving rise to a variety of symptoms closely simulating organic lesions (myocarditis and arhythmias).

To give you an optical illustration of what I am speaking of, let us take the von Pirquet reaction. It is a local manifestation of tissue sensitization to tubercle protein. It fades after a certain number of days. You then inject the patient with a subcutaneous dose of tuberculin. The old site of the von Pirquet reaction flares up, as it did on the original occasion. This is a striking analogy of what occurs on a heart valve, or the musculature, or the neurogenic structure of the heart.

Very often in cases of secondary polyarthritis, you have seen joints swell up, get red, painful, and hot, and then these manifestations would disappear in a few hours, or days. Such symptoms are evidences to me of local tissue sensitization to protein, and not signs of bacterial deposits. In many instances of mild polyarthritis, I am convinced, joint symptoms are purely local anaphylactic reactions, and not due to bacterial invasions of the sites. We have the analogy of this in the arthritis following serum sensitization in antitoxin therapy. And so we can multiply instances with their analogies of local tissue sensitization to protein worked out by clinical or experimental data.

Now, I wish to call your attention to a working theory of the mechanism of focal infections. It is based on the fundamental factor of virulence of the bacteria in a focal site. If the virulence of the bacteria is very great, the invasion of the blood-streams results in bacteremia with stormy symptoms of intoxication followed by death, marked local septic areas, or occasional recovery. The clinical picture is acute; the patient is always in the hands of a physician, and it is a question of life and death.

In the second type of infection the virulence of the bacteria is not so great. The invasion of the blood-stream results in acute endocarditis, arthritis, appendicitis, cholecystitis, etc. The patient is quite ill, is usually attended by a physician, and there is a tendency to chronicity with prolonged care. These are the patients who make up the usual hospital population.

In the third group the virulence of the bacteria is very low; in fact so low that when they are thrown into the blood-stream they are promptly destroyed, but their proteins are liberated, and it is these bacterial proteins which cause symptoms so diverse and varied that it is only by clinging to this idea of local-tissue sensitization by proteins that we can explain or group the protean clinical phenomena. It is in this group, the low virulence group, that the bulk of the population belong. It is that large mass of people floating from one clinic to the other seeking relief from symptoms which are more or less

functional in character. Briefly, and to illustrate, this large group may be divided into anatomical divisions: the respiratory group with its recurrent rhinitis, fleeting sore throats, and the asthmas; the cardiac group with its passing endocardial attacks, irregular hearts, such as extra systoles, tachycardias, and flutters; the abdominal group with its pyloric spasms, gall-bladder colic, appendiceal colic, or colic anywhere along the enteric tract; the renal group with its cyclic albuminurias, recurrent nephroses, pollakiuria; the articular group, of which all the mild arthritides are members; and the skin group with its urticarias and eczemas. I am inclined to believe that the vegetative, as well as the autonomic centers are sometimes involved, giving rise to vagotonias or sympathicotonias; and even motor areas are not immune, giving rise to muscular irritabilities and asthenias.

None of these classifications based on virulence are as clear cut as the chart, which see, indicates. There are all sorts of graduations and overlappings of these groups. Many times I have seen urticarial attacks and functional derangements of the heart in diseases classified under Group 2 or even Group 1.

In conclusion, I wish to emphasize that it does not take much protein poison to produce symptoms. Experimentally, infinitely small amounts will call forth anaphylactic storms in a sensitized animal. It behooves us, therefore, to seek every possible focus which may be a source of bacteria or protein supply. The commonest site of the low virulent type of infections is at the tip of devitalized teeth; therefore any dead tooth should be looked upon with suspicion, and should be removed. Especially is this true in cases where the symptoms continue after the eradication of the more obvious foci. Unfortunately the *x*-ray does not locate these small areas around dead teeth for us, and for that reason I am much in favor of extracting all dead teeth in patients exhibiting functional disturbances.

For these reasons, as above elaborated, I have termed my talk "Further Reason for the Reduction of Foci in Focal Disease."

CHART 1

MECHANISM OF FOCAL INFECTION

1. Virulence, Bacteremia, Deposits
   - Critically ill.
   - Death or complete restitution.
   - Chronicity.

2. Virulence less.
   - (a) Showers of bacteria, mild bacteremias, deposits.
     - Heart.
     - Joints.
     - Kidneys.
     - Gall-bladder.
     - Stomach, etc.

     → Recovery with minor injury to parts. Chronic recurrent attacks.
   - (b) Associated protein sensitization manifested in various tissues, urticarias, joints, heart, etc.

3. Virulence (very low). Showers of bacteria, bacteria destroyed by blood.
   - Protein sensitization only.
   - Functional disturbance with mild tissue changes.

     → Heart. Joints. Smooth muscle segments. Skin. Urinary tract, etc. Thyroid. Vagus. Sympathetic. Motor areas.

DISCUSSION OF THE PRECEDING PAPERS

THE CHAIRMAN: These papers of the afternoon are now open for discussion. We will take them up in order, first Dr. Hartzell's paper. I want to say that every attendant at this series of symposiums is free, and is invited, to take part in the discussions. I am going to limit the time of discussion to five minutes for each speaker so that all will have a chance to take part. Dr. Hartzell's paper is now open for discussion. If there is no discussion, I will ask Dr. Hartzell to close.

DR. HARTZELL: I think I have nothing further to add except to confirm Dr. Ulrich's observations in regard to the protein sensitization. We believe we are dealing constantly with types of bacterial protein sensitization, and that, every time a small group of bacteria find a way into the blood-stream of the invalid, when he has reached the point of saturation with "strep." for instance, you are likely to have just what he described.

And I do not believe that the condition he described depends upon a mass of bacteria sprayed into the stream and making a new lesion, rather do I believe it is sensitization resultant from the protein poisoning.

Dr. J. G. Parsons (Sioux Falls, S. D.): In considering focal infections of the nose and throat, it seems to me there is one thing that has been very much neglected and overlooked.

We are all aware of the great importance which is to be attached to infections of the tonsils and, as Dr. Hartzell has so well brought out, those of the teeth; but, I think, we have been overlooking the importance of focal infections of the nose.

What Dr. Hartzell has stated regarding infections about the teeth cannot be controverted, but I wish to call your attention to the fact that in the ethmoid labyrinth we have the best equipped place in the human body for catching and holding and keeping in operation infection. The nose is exposed to infection every breath we take, and the ethmoid cells are so situated that they become very easily involved by extension of this infection from the nasal chambers. We overlook these ethmoidal infections (when I say "we" I mean the men who are doing special work in this line) because we do not take time enough to investigate thoroughly.

If we find a frank discharge, polyps, etc., the diagnosis is easy. If, as Dr. Hartzell has told us, a little apical abscess at the root of a tooth, by the production of quantities of bacteria and by protein sensitization, may start a great deal of trouble, why can we not have hidden in the recesses of the ethmoid cells even larger foci of infection which may easily escape ordinary investigation?

Small foci of this kind may escape attention even when the skiagraph is used. I believe you can make a diagnosis of ethmoiditis with a good skiagraph; but, if the plate is negative, it proves nothing. I recently reported a case which puzzled all my colleagues. All of the methods at our disposal were used in making repeated examinations. Skiagraphs showed nothing. Following up the suggestion made by my friend, Dr. Dean, of Iowa City, I made an exploratory opening of all the sinuses finding an antrum involvement on one side and an ethmoidal involvement on the other. This patient had been in bed seven weeks, with characteristic fluctuations of temperature, developing an interosseous abscess on the forearm, and myositis in the neck, which was extremely puzzling; and all we could conclude as to its origin was that there was a focal infection somewhere.

I believe we need to consider the ethmoid seriously because it is the best possible catch-trap and hiding-place for infection. In the second place we have been overlooking it because we have not made a business of running it down; and, thirdly, I feel that we need to consider the advisability of making an exploratory examination, if necessary, to find out the exact condition. We do it in the belly; why not in the nose?

The Chairman: The next paper, that of Dr. Wood on "Focal Infections as Related to the Eye," is now open for discussion. Dr. Wood, have you anything more to say?

Dr. Wood: Nothing further.

The Chairman: Dr. Parker, "Focal Infections Related to Suppuration in the Nose and Throat." Anything more? Dr. Parsons has got us started. Dr. Tilderquist.

Dr. D. L. Tilderquist (Duluth): This morning, in seeing a radical mastoid done by Dr. Newhart, he called attention to the fact that very little in this symposium was said about infections of the ear and that set me thinking that we have said very little about it. I have often been struck by the fact, or at least to me it has been a fact, that, in spite of all the running ears that we have and see constantly, we doctors trace few focal infections to such disturbances.

I think it is due to the fact that, although the drainage may be poor, yet there is some drainage, and it is not a closed cavity, but I can call your attention to one significant thing which was illustrated to me in one case and that is, that you may have in the ears a blind abscess, one which does not discharge.

I recall a young man who suffered for years from what we popularly call "rheumatism," muscular pains, possibly joint pains, and at one period of time some distress and disturbances of the heart. Nobody found anything definitely wrong, and he went on for a number of years, finally ending up with an acute meningitis. The surgeon or the doctor who had charge of him had discovered that he had something wrong with one ear, and thereupon opened the mastoid. He found a very hard, sclerosed mastoid, and came to the conclusion that the meningitis was the direct result from a focus in the mastoid.

I am convinced that in this case there had been a focus for years. There had been no complaint of ear trouble and no discharge from the ear, and no complaint or any trouble with the hearing. So that, when we keep looking here and there for a focus, as we often do, I want to emphasize that possibly we may discover one in the ear, of which there is no indication in the complaint itself.

The Chairman: Any further discussion? If not I will call on Dr. Parker.

Dr. Parker: Nothing more.

The Chairman: We now come to a discussion of the final paper, "A Further Reason for the Reduction of Focal Infection."

Dr. J. W. Andrews (Mankato): If I get away from the subject you will call me back. I am thinking about the large number of general practitioners here, and I am sure that after listening to these specialists on these various subjects we are overwhelmed with the responsibilities that are ours when we go to our homes. Of course, we can not learn here in a few minutes or by hearing these papers read how to diagnose these several focal infections. We begin with the teeth. We always examine the teeth if we have an infection of any kind; but how is the general practitioner going to determine whether there is pus at the roots of the teeth? With the *x*-ray? Not always. Send him to a dentist? We can not always do that.

Then we turn to the other infections, the peribronchial infections. We must learn to diagnose these several infections, because, as modern physicians and surgeons, we believe that nearly all diseases are due to a focus of infection somewhere. But the difficulty

that we meet when we go to our homes and into our various practices is to locate those infections, and when we hear these splendid papers from these specialists, I say we are overcome with the weight of the responsibility, but I wish these specialists would, if possible, point out to us some way to locate these various infections.

Dr. Parsons has spoken of the infection in the ethmoidal cells; another has spoken of the peribronchial infections; another has spoken of the infection in the ear where there are no symptoms as in other infections, and yet there is pus.

I want to say that I hail with delight this period of progress in the medical profession when we are getting at the real cause of disease, instead of treating symptoms.

THE CHAIRMAN (Dr. S. Marx White): Is there any further discussion? This is one of the most interesting phases of this entire subject of focal infections. The chairman craves your indulgence for a moment in speaking on these subjects, but the tremendous amount of information that has come to us in the past seven or eight or ten years in relation to focal infections, as they are associated, at least, with various other maladies in other parts of the body, has become to me one of the most important subjects in modern medicine.

I am not going to weary you with an attempt to recite all the various things that can be logically and legitimately associated with focal infection. They are many. But I do think that Dr. Ulrich has brought out one of the points which needs most careful attention in our search for focal infections, when he emphasizes the importance of the "micro," or small, minute, scarcely recognizable foci of disease.

These big processes we can see in a röntgenogram without trouble require no decision as to what shall be done. It is patent what shall be done. These foci of infection in the sinuses in which a gross discharge occurs or in which it is evident that the sinus is filled with pus, are not at all difficult. They are sometimes difficult to find, particularly as Dr. Parsons has so splendidly brought out, in the ethmoid and sphenoid cells where examination is difficult and where the common methods of investigation may fail to reveal the focus. The experience of which he speaks is a not uncommon one with me of making it necessary for the surgeon dealing with that location to actually make an exploratory operation, if you want to put it so, in order to find the presence of foci. But I believe your experience will confirm me in this statement, that it is not commonly necessary to go that far before the actual diagnosis, particularly in that region, can be made.

But I am referring to focal infection around the teeth and focal infections in the tonsils, teeth and tonsils and sinuses which do not show, and which on careful investigation of the disease might show some evidence of infection. I do not want to go to the extreme of saying that every tonsil that is slightly affected should be removed or any tooth that has a slight amount of infection should be extracted. But the problem of the degree to which attacks shall be made on the foci of infection to my mind is largely a problem as to how much is involved and what is its character in that body.

Many skin diseases that have not been thought formerly to be related to it, signify certain conditions now known to be due to protein sensitization, like uritis; some eczemas, some skin infections and inflammations we have are being shown to be due to some form of protein sensitization. The idea that protein sensitization, as well as bacterial infections, has a part in this makes it necessary for us more thoroughly to divide the smaller areas of infection into those without pus, etc., and places a great burden on us for careful study and careful consideration of the degree to which removal of these foci of infection should be carried.

SOME VISITORS' VIEWS OF CLINIC WEEK

The afternoon symposiums of Clinic Week constituted an integral and distinctive part of this year's Clinic Week. Their relative value cannot readily be determined, even from the estimates obtainable from the men who attended both the morning and the afternoon work.

Having published the four symposiums, in this and preceding issues, we give herewith comments by a few visitors on the work of the Clinic, together with thoughtful suggestions, which apply to all medical meetings.—THE EDITOR.

From Dr. Daniel V. Moore, Yankton, S. D.

THE JOURNAL-LANCET:

In response to your recent letter asking for comment concerning the Minneapolis "Clinic Week," I beg to offer the following expression:

1. The class of work offered by your conscientious men is praiseworthy, and would profit any man to witness.

2. Urge concentration, so that those whose time is limited may devote more hours of the day to observation. A great deal of clinical work may be performed during the evening hours. It would be well also to have a few boys or girls in uniform to pilot those who are not familiar with the city, thereby conserving time in seeking hospitals.

3. It is high time to openly condemn surgical bolshevism. There is a spirit of surgical camouflage abroad in the land which flies pretty high and the antisurgical graft guns should be turned upon them. To condone a wrong from whatever source is almost as bad as the wrong of commission. It is high time for us who are doing honest surgery to speak up and tell the truth regardless

of the sinister influence of the surgical pirates. The present-day curse of surgical politics, along with its real purpose, backed by the smooth and cleverly camouflaged system of pathologic findings, constitutes a greater danger for people of means than any other system of professional dishonesty known. The stage is too frequently infringed upon by the operating amphitheatre. The "audience" should be encouraged to "speak up" when they "wake up" and boldly to point out the horrible difference between reality and tragedy in the operating chamber. Throughout the land there is much mouthing about the "Trust," but as yet there is lack of courage in the "drive" against the same.

Fortunately, the great bulk of work performed by the men conducting Clinic Week is free from this blighting and dangerous influence and those who attend may feel they are receiving benefit and instruction given honestly from honest hands.

I hope that you may understand me clearly.

Fraternally yours,

DANIEL V. MOORE.

From Dr. G. R. Curran, Mankato

THE JOURNAL-LANCET:

I have no criticism to offer, either constructive or destructive. The work was well worth going many miles to see.

I have this suggestion: Why not make it a continuous affair? It may take a little more work on somebody's part, but the effect on the surrounding country would be good. One of the great pleasures in going to New York is being able to step into the Academy of Medicine and seeing what is going on through the whole city.

Sincerely yours,

G. R. CURRAN.

From Dr. J. G. Parsons, Sioux Falls, S. D.

THE JOURNAL-LANCET:

Comment on the Minneapolis Clinic Week among South Dakota men has been most favorable.

The arrangement of the various clinics seems to me to have been excellent, and the symposiums provided for the afternoon sessions afforded not only an agreeable variation in the program, but they were of a most helpful character.

I would venture two suggestions: It would be better to have the date set earlier, for the reason that a number of medical meetings occurred this year at about the same time, followed by the A. M. A. meeting to come early in June. This crowds things so that one finds it difficult to do justice to his work and attend the meetings which he might do if they came a little farther apart.

It appeals to me that a "mixer-smoker" would be more desirable than a formal banquet. This gives opportunity for rubbing elbows, and does not interfere with entertainment. Why cannot you have "con-fumatory" speeches as well as post-prandial?

Fraternally yours,

J. G. PARSONS.

From the Grand Forks (N. D.) Visitors

THE JOURNAL-LANCET:

Kindly accept our congratulations on the success of your recent Clinic Week. Our District was well represented, and those who attended consider themselves well repaid.

The criticisms that we heard are few! The amount of clinical material exhibited, and the quality of work done, were all that could reasonably be expected or desired. It might have been more satisfactory if the cases had been grouped as to subjects and days,—for instance, respiratory diseases one day, circulatory diseases another, etc. The same might be said of surgical cases, featuring special subjects on particular days.

The afternoon Symposiums were excellent. The splendid attendance at all of them is evidence of their popularity. If, on the following day, clinical cases could have been shown, illustrating the points made in the papers, they would have been still better.

Five days would be better than four. We feel that, in popularity and usefulness, the clinics should increase from year to year.

GRAND FORKS VISITING DOCTORS.

From Dr. W. R. Shortridge, Flasher, N. D.

THE JOURNAL-LANCET:

We country doctors like to see and hear the technical and scientific part of the medical and surgical work of Clinic Week, even though we may not be able to understand and later use all we see and hear. We learn where we can get the benefit of this for our patients; what to promise in the way of relief or diagnosis; and what to expect in cases we are unable to cure with time and equipment we have at home.

We may get even more benefit from the prac-

tical work so presented than we can assimilate and use.

I would like the afternoon work so arranged and presented as to induce more extended and freer discussion by visitors; perhaps arranged for, to some extent, before the subject to be discussed was presented—any good method to secure a lively discussion.

No two of us would agree exactly as to proportion of medical and surgical work.

Those of us who are crowded into surgery feel the need of all we can get, and so select that part mostly; and we hope it will not be curtailed.

Respectfully,

W. R. SHORTRIDGE.

From Dr. A. H. Bishop, West Bend, Iowa.

THE JOURNAL-LANCET:

I was able to attend only two days of the Clinic, and I must say that I enjoyed them, and thought they were very helpful, especially the medical clinics, and I hope to be able to attend next year's Clinics.

The papers at the afternoon sessions and the discussions were fine. Thanking you and the fraternity of Minneapolis for making it possible for me to enjoy this treat, I am,

Yours truly,

A. H. BISHOP.

From Dr. A. E. Spalding, Luverne, Minn.

THE JOURNAL-LANCET:

I feel that the physicians of this section owe the Hennepin County Medical Society a vote of thanks for establishing their "Clinic Week." The abundance of material and the high-class work that I have witnessed at each of these meetings have more than paid me for the time spent.

The increased attendance this year shows that your efforts are appreciated.

Yours truly,

A. E. SPALDING.

From Dr. H. J. G. Koobs, Scotland, S. D.

THE JOURNAL-LANCET:

I enjoyed the clinics very much, and I feel that much credit is due the men getting them up.

I do not want to criticize in any way, but it occurred to me that you could give us a larger amount of medical and neurological clinics, and have them much appreciated. Also if the clinical facilities, that is, seating or at least observation capacity of the hospitals, could be increased somehow, it would be much appreciated.

As the operating-rooms are now, only a few men can get anything out of an operation at any one time.

Fraternally,

H. J. G. KOOBS.

SOME NOTES AND OBSERVATIONS ON SYPHILIS*

BY H. E. MICHELSON, M. D.
MINNEAPOLIS

The following paper is to a large extent an effort to bring together material gathered from various sources, and to state such personal observations as may be of practical interest.

A short concrete picture of the general pathology of syphilis, as viewed by Fildes, will to some extent show that, although the clinical difference between a chancre and general paresis is great, nevertheless the underlying mechanism is the activity of the spirochete.

An individual becomes infected with syphilis. At the site of inoculation there is no immediate reaction. The spirochetes, however, rapidly multiply here, so that at the end of the so-called first incubation-period there may be enough cell-reaction to give the clinical picture called the "initial lesion or chancre." This local-tissue reaction is by no means constant, and we occasionally see cases develop in which a history or traces of the chancre are entirely wanting. Thus we know that the chancre need not necessarily develop. The spirochetes may gain direct entrance into the lymph- and blood-stream. Whether dissemination takes place from a primary focus or by direct inoculation of the circulation, the second incubation-period is the time necessary for the infection to be carried throughout the organism, and the "secondary rash" is the reaction of the tissues to the spirochetes and their toxins. These reactions are protective, a great mass of the spirochetes in the body being destroyed, while others become lodged in parts which do not react so readily, allowing the spirochetes to entrench themselves and lie dormant for long periods of time. If, then, in the later stages of syphilis the spirochetes,—for instance,

*Presented before the St. Louis County Medical Society, May 17, 1919, Duluth, Minn.

in the walls of a blood-vessel,—succeed in overcoming the factors which hold them in check, and are carried to regions which in the first generalization became sensitized, then, when a small amount of toxin is liberated, the surrounding tissues react violently, causing thrombosis with subsequent necrosis, resulting in the so-called "gumma." This sensitization of the tissues is the only true distinction between secondary and tertiary lesions. In the early stages tissues react to a mild degree to a certain dose of toxin. In the late stages, the tissues react excessively to any dose of toxin, so that a much larger lesion is produced by a much smaller intoxication.

Syphilis in the nervous system does not vary pathologically from syphilis elsewhere. The walls of the capillaries of the brain and cord are attacked in the generalization as are the capillaries elsewhere. There is a certain amount of reaction in the meninges and central nervous system comparable with the lesions in the skin. The tissues of the meninges and the cerebrospinal system become sensitized in the acute stage, and, if an exacerbation of spirochetes takes place, "tertiary" lesions may develop there. The different clinical picture depends upon the location and extent of the involvement of the tissues.

If the inflammatory process is chiefly developed in the interstitial tissues, such as the capillaries, perivascular spaces, meninges, etc., we have the so-called meningovascular syphilis of Head and Fearnsides, including all forms of "cerebral lues," gummatous meningitis, etc. If, on the other hand, the nerve tissues are chiefly involved, we have the parenchymatous encephalitis, or myelitis or syphilis centralis of Head and Fearnsides, which includes paresis and tabes.

From the brief outline above, we are at once struck by the fact that every means should be used to diagnose and treat syphilis before generalization is completed, thus preventing sensitization, or, in fact, the invasion of vital organs. Fortunately, most cases exhibit an initial lesion. Here the diagnosis is essentially a laboratory diagnosis. We must, therefore, impress medical men with the paramount importance of the "dark-field examination" of all genital sores, and persistent extragenital sores regardless of location. We must particularly warn against the use of caustics, antiseptic powders, and "cock-sure" clinical diagnosis. The chancre is not a lesion which conforms to a set of rules. It may vary in size from a microscopic lesion to the huge "giant chancre," which is occasionally seen up on the abdominal wall. The induration upon which so much stress has been laid is also variable, and cannot be a criterion in diagnosis. It may vary from the small degree noted in the parchment chancre to the stone-like hardness observed in chancres that involve the deeper parts. Also the anatomical location greatly modifies the findings. *In fact, the only constant feature of all chancres is the spirochete.* It can be demonstrated in a relatively large percentage of cases (nearly 100 per cent), if the medical profession and the lay public can be instructed against local treatment of lesions in which there is the slightest chance of their being specific. If there is any doubt about the diagnosis, or procedure to follow, use a normal saline dressing until facilities can be procured for proper examination. As regards methods, I think we should mention the staining and ink-background methods only to condemn them. The chances for error are too great to warrant their place as methods of precision. In every locality someone must become proficient in dark-field diagnosis; and physicians should feel the great advantage to be derived in submitting their cases, especially genital lesions, to this individual for diagnosis. In case of repeatedly negative microscopic examination, we have the clinical findings and the Wassermann reaction to aid us in diagnosis.

The anatomical location of the chancre to a large extent determines the type of chancre, and for certain localities there are types of chancre which are more or less constant for that region.

The chancre is not an ulcer, although ulceration may take place from the loss of nutrition due to infiltration. Also venereal ulcers due to a variety of causes may be secondarily infected by the spirochete.

Chancres of the shaft of the penis are usually of the papular variety. Ulceration is early, and subsequent scarring is common. Induration here is quite marked, but not as much so as when located on the prepuce. Chancres of the prepuce show the greatest amount of induration. Here the infiltrate can be seen, so to speak, for, when the prepuce is retracted, the cartilaginous disc-shaped mass turns over on end, and is very noticeable.

Chancres in the glans may be of the ulcerating type with considerable induration, or they may be of the parchment type, which is characterized by the small degree of induration, the shallow scooped-out appearance, and the beef-red, varnish-like crust. Chancres at the meatus usually involve both lips, and when the lips are everted

the two parts make nearly a circular sore. Ulceration here shows a dirty, rather adherent base. The induration is marked, and scarring results only if the process remains untreated for a long while. The scars then will be quite typical. The area immediately about the meatus will be gnawed out, leaving the meatus at the bottom of a healed ulceration.

Of the extragenital chancres, I want to particularly mention the lip chancres. They are usually larger, more hypertrophic, and have a heavier crust which is adherent. Oozing is profuse on loosening the crust. Glandular involvement is marked, the glands attaining a large size, and are somewhat tender and lead to mistaken diagnoses because of their huge size.

After treatment the location of the sore remains marked for a long time, there being a more intense tissue reaction. Scarring is disc-shaped, and involves the skin as well as the mucous membrane. This brings up the subject of scars. *I do not believe that we should make a diagnosis of a previous chancre from a scar alone, even if on the genitals.* Scars result only when the chancre has gone untreated for some time. Ulceration is at the expense of the new infiltrate; hence, when the infiltrate is removed by early treatment, the previous signs of the chancre are removed. Scarring results, if the ulceration is deep enough to involve the normal tissues. Mixed infection favors scarring, as pus infections are destructive.

Adenopathy is a constant accompaniment, but the arrangement and degree of glandular enlargement are variable. As a rule, the glands nearest to the lesion are the largest. The dorsal lymphatic of the penis, when involved, is diagnostic.

The Wassermann test, introduced in 1906, is firmly established as a valuable diagnostic aid. The practitioner need not understand the intricate details of the technic, but he must be able to interpret the result as reported to him by his laboratory. There is a great need for standardization of methods in making the report. I do not believe that the method of showing the degree of inhibition should be reported as "two plus" or "four plus." If the degree must be known, it should be numerical,—as 100 per cent; 50 per cent, etc. I think, however, it would be better to report only "positive," "negative," or "repeat." "Slightly positive," "doubtful," etc., are dangerous reports, and may lead to mistakes in diagnosis. The physician should also know that the same serum sent to two laboratories may vary according to the antigen and quantity of serum used. Therefore, in following a case of syphilis through, it is advisable to use the same laboratory, and the physician should ascertain what technic his laboratory is using.

For the intelligent interpretation of Wassermann results it is essential for the practitioner to know the percentage of positive results which may be expected in the various states of syphilis.

The Wassermann is of no value in the early diagnosis of genital sores. It is not positive at the onset of the chancre. Levy-Bing, Gerbey and Haag have made a careful study of the time in which the Wassermann becomes positive, and they report that it is always negative before the 35th day after exposure, and always positive after the 46th day. During this period of 11 days, which they call the "critical period," it may be positive or negative.

After generalization with "secondary" skin or mucous membrane manifestations, the reaction is 100 per cent positive.

During the period of latency, the reaction shows from 70 per cent to 85 per cent positive results, depending upon previous treatment, age of the disease, severity of the manifestations, etc. It is in the Wassermann positive, latent case, with no history of infection, that keen judgment is necessary. *Should one make a diagnosis on a positive Wassermann alone?* I think not. Especially not on a single positive Wassermann. A repeatedly positive Wassermann speaks for lues, but the history, clinical findings, and general "size-up" of the case must be the criteria for instituting treatment, and not the Wassermann alone. Conversely, a case which is clinically syphilis, regardless of a negative Wassermann, should be treated as syphilis.

Treatment.—In treating syphilitics, we must consider the age of the infection, the extent of the infection, and the individual. For the sake of convenience, we may group cases according to type.

Type I. (Early chancre: spirochete, positive; no adenopathy; Wassermann, negative.) This type offers hope for an abortive cure. This, if possible, may be effected by giving a series of no less than six intravenous injections of salvarsan or derivatives at short intervals (three to four days) to be followed by twelve Hg. injections, and then repeating the six salvarsans. The patient should be kept under observation, and Wassermanns taken at four-month intervals for a period of eighteen months. If no symptoms have occurred, and the Wassermann has re-

mained negative, we have reason to believe that the case has been "cured." Reinfections have been repeatedly reported following such a procedure, which is the best proof of cure.

Type II. (Chancre: spirochete, plus; adenopathy present; Wassermann, positive.) This type of case has gone to generalization as evidenced by the positive Wassermann, and should be handled the same as Type III.

Type III. ("Secondary" eruption; general adenopathy; Wassermann, positive.) This is the more common type of case, and requires a maximum amount of treatment. We begin with salvarsan because we wish to cut off the activity of the spirochete immediately. I have never seen any serious results from intensive arsenic therapy when administered at the height of eruption. The initial reaction is more intense, but the return to normal is faster; therefore we give from four to six salvarsans at four-day intervals, and immediately follow with Hg. injections. We prefer to give injections for the first course because we are certain that the patient is getting the maximum mercury effect. Following the mercury, we give iodides in moderate dosage, and then repeat four salvarsans. After this course we give a rest of six weeks, and take a Wassermann. Whether positive or negative, we repeat a course of mercury, giving either injections or rubs. The patient is then allowed to rest for three weeks and is then given iodides for three weeks. Immediately following the iodides a course of salvarsan is given. He is then ready for a ninety-day rest. This completes the first year of treatment. *If there have been no recurrences and the Wassermann is negative, future treatment need not, and should not, be so intense.* Two courses of salvarsan and two courses of mercury for each the second and third year should suffice.

Syphilis is a recurrent disease. Initial treatment must be intense, for the disease is more active in its first stages. Recurrences can be avoided by recurrent treatment at well regulated intervals; but constant treatment is a mistake. The spirochete undoubtedly becomes tolerant to the drugs and the vital organs of the patient may become damaged, and the morale of the patient be shattered. We must not attempt to cure the disease, and, in so doing, injure the patient. Mercury treatments must be watched closely. The insoluble salts are more practical in an ambulatorium, but the technic must be perfect. Nodes, sclerosed gluteal muscles, and even abscesses are in the main due to improper technic. The deposit of salt suspension must be within the muscle tissue, and not subcutaneous. In case of nodes forming, subsequent injections must be delayed. The region should always be palpated, and the administrator of the injection constantly on the alert for signs of intolerance. Soluble salts cannot be used so readily in the average clinic. In private work I have used aqueous solutions, but found them more irritating and less satisfactory than the salicylate. The salicylate occasionally causes renal irritation, but we find this in relatively few cases, and then it is transient.

Inunctions are satisfactory when properly administered. The rubbing must be gentle, but the duration of friction should not be under twenty minutes. Neosalvarsan is administered with a 20 c.c. syringe, the average dosage used being 0.6 gm. to men. This is dissolved in 20 c.c. of sterile water, and injected slowly. Reactions are rare, and when present are usually of the toxic-shock type. This is probably due to the so-called substance X, and cannot be avoided. We are now using neosalvarsan (Metz) and have had no reactions of the toxic type. An occasional case of arsenic intolerance is noted. We stop further injections when an intolerance is discovered. Subsequent courses are given with caution. We give lower dosage at longer intervals, or we change the product. However, I have noticed that if the patient is intolerant to one brand, he will have reaction to another brand of similar product, but may tolerate the old salvarsan when he reacted with neosalvarsan.

The technic of venopuncture must be mastered by one attempting to administer intravenous medication. There is no excuse for sore arms. The administrator must be confident that his needle is within the lumen of the vein, and must stop his injection immediately if there is resistance or wheal formation; do not wait for the patient to complain of pain.

Old syphilis is treated by infrequent courses of arsenic and mercury. The intervals may be longer than in fresh syphilis. We usually begin such cases with mercury, then iodides, following with salvarsan, the Hg. and iodides combating the infiltrations allowing the salvarsan to penetrate tissues, which it might not be able to reach if the other drugs were not administered first.

Syphilis of the nervous system.—The first effort here must be by prolonged intravenous therapy and mercury. Intraspinous therapy is a

hospital procedure, and should not be attempted in an ambulatorium, if at all.

COMMENTS

1. The dark-field is essential for all early diagnoses of chancre, and the discovery of the specific spirochete in a lesion is indisputable proof of luetic infection.

2. The Wassermann reaction cannot be obtained earlier than the thirty-fifth day, and it is an unpardonable error to wait for a positive Wassermann in early infected cases.

3. Abortive "cures" are possible if the infection is discovered before general systemic infection has taken place,—that is, before a positive Wassermann.

4. In treatment, the individual must be treated as well as the disease. Competent consultation must be sought when special tissues are involved, such as the aorta, the nervous system, the eyes, etc.

5. A Wassermann rendered negative is no proof of a cure, the sum total of treatment over a sufficient length of time being essential.

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MISCELLANY

THE HEALTH HABIT

Twenty years ago I knew a man called Jiggins, who had the health habit.

He used to take a cold plunge every morning. He said it opened his pores. After this he took a hot sponge. He said it closed the pores. He got so that he could open and shut his pores at will.

Jiggins used to stand and breathe at an open window for half an hour before dressing. He said it expanded his lungs. He might of course have had it done in a shoe shop with a boot stretcher, but, after all, it cost him nothing this way. And what is half an hour?

After he had got his vest on Jiggins used to hitch himself up like a dog in harness and do shadow exercises. He did them forward, backward and hindside up.

He could have got a job as a dog anywhere. He spent all his time at this kind of thing. In his spare time at the office he used to lie on his stomach on the floor and see if he could lift himself up with his knuckles. If he could, then he tried some other way until he found one that he couldn't do. Then he would spend the rest of his lunch hour on his stomach, perfectly happy.

In the evenings in his room he used to lift iron bars, cannon balls, heavy dumbbells and haul himself up to the ceiling with his teeth.

He liked it.

He spent half the night slinging himself around the room. He said it made his brain clear. When he got his brain perfectly clear, he went to bed and slept. As soon as he woke he began clearing it again.

Jiggins is dead. He was, of course, a pioneer; but the fact that he dumbbelled himself to death at an early age does not prevent a whole generation of young men from following in his path.

They are ridden by the health mania.

They make themselves a nuisance.

They get up at impossible hours. They go out in silly little suits and run marathon heats before breakfast. They chase around barefoot to get the dew on their feet. They hunt for ozone. They bother about pepsin. They won't eat meat because it has too much nitrogen. They won't eat fruit because it hasn't any. They prefer albumen and starch to huckleberry pie and doughnuts. They won't drink water out of a tap. They won't eat sardines out of a tin. They won't use oysters out of a pail. They won't drink milk out of a glass. They are afraid. Yes, sir, afraid. Cowards!

And after all their fuss they presently incur some simple, old-fashioned illness, and die like anybody else. —Stephen Leacock, in Dallas News.

THE
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The Official Journal of the
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"WE'RE ALL CRAZY, SO WHY WORRY?"

The above title was culled from a Philadelphia paper, written in an endeavor to report what the president of the American Medico-Psychological Association said in an annual address at Philadelphia. And the reporter who heard the address said that Dr. E. S. Southard, of Boston, expressed himself as follows: "Everybody is crazy, and always has been, but you need not feel insulted. It isn't any disgrace to be crazy, nor is it an insult to a man to say that he is crazy, only it would sound better if you said he was 'suffering from either a minor or major neurosis.'" The speaker went on to say that all of us suffer from various psychic disorders, all of which can be classed as various forms of insanity. In other words, the only difference between the man who is temperamental and the man who is insane is that one is treated politely and the other is confined in an institution. In reality, none of us have anything on Lenine or Trotzky or the Kaiser when it comes to being "100 per cent sane," as saneness is, after all, only a relative term. But insanity has many manifestations, and it is well to remember this. President Wilson declared recently that members of his Cabinet were "temperamental" at times. If that be the case, and if it be true that "a cat may look at a king," then it is presumable that even a psychiatrist may look at a Cabinet officer.

Dr. Southard further maintains that bolshevism, anarchy, and paranoia are all forms of insanity, having their origin in the past ages, and are probably products of evolution, and that all of these things which cause unrest should be in the hands of the trained psychiatrist. Temperamentalities, Dr. Southard went on to explain, are merely different forms of neuroses, or brain and nerve disorders, and may well be classed as forms of insanity. And these types of insanity may be found among "high-brows," cabinet officers, individual civilians, professors, even presidents, doctors, workmen, all of whom have their own individual peculiarities, which are as much forms of insanity as the disorders which affect inmates of institutions for the dangerously insane.

These abstracts from Dr. Southard's address are not idle or altogether amusing statements, because they actually cover facts that have been known for some time, although not very freely admitted. A great many people make a mistake in not recognizing the mental equation of the individual. Not infrequently doctors find that a man is sound in his various organs and in musculature, while they look upon his mental state as one of no consequence whatever; but, as a matter of fact, it is probably the keynote of the situation which the doctor overlooks. When a physician finds that a man's heart, lungs, and kidneys are sound, and forgets to analyze the mental state of the individual, it shows that the physician is a man of what may safely be termed low visibility. Then, also, there is too much sentimentality concerning the man whose mind is twisted. It is either twisted or it isn't, and why not admit that the mental processes may be out of gear? There is nothing disgraceful about it; it is no more than any other symptom, and surely it is much better and much more reasonable than the admission that the patient has a disease which the municipality could have prevented.

Therefore, do not worry if you are a trifle crazy!

THE PRIZE FIGHT

A very good editorial appeared in the *New York Sun* a few days ago on "How Good Is Middle Age?" The editorial referred, of course, to the prospect of Mr. Jess Willard, former champion, getting back to his former physical condition when he was over thirty-seven years of age.

Since then, in the comments of the reporters who witnessed the easy "knock-out" which Willard received several times in succession, the

fault is attributed to his conceit, and suggests that he was over-confident, ignorant of his own condition, and neglectful of the training which should put a man of his physique in good shape to stand up for more than three rounds.

These two things,—his lack of intensive training and his over-confidence in himself,—were wholly his own fault. This "knock-out" is simply one of the many things which the man past middle life must expect. He attains a certain pedestal of success; he thinks that the world could not possibly revolve on its axis without him, and he fans himself into the belief that he is the only real thing in existence. As a matter of scientific knowledge, he is really comparable to the ant, in size, as a unit in the universe; and, as another painful matter of fact, the world seems to get along with new timber just as well as it did with the old. When some man steps out, another man steps in, and fills his place. But that should not make the old boys feel that they must give up at thirty-seven, for some of them are quite capable of working until they are ninety-four. Of course, these men are few and far between, and their muscular structure is, perhaps, not up to par, but they have all the earmarks of being alive.

The other side of the question is the systematic methods of training which the present champion enjoyed. He was trained and cared for by someone else, and told what to do and what not to do; and he was trained by experienced men who were capable of judging when a man is fit and ready. To this and to his youth (twenty-four years of age) he owes his success in the prize ring.

As champion he illustrates the thing which has been done several times before, when men who have risen to eminence in pugilism have been knocked out by some man whom they laughed at. The idea leads us again to the editorial in the *New York Sun*, which deals with this topic, "How Good Is a Man in Middle Age?" It says, in its introduction, that the interest in the impending fight was not limited to the "fight bugs," but that men who are home-loving, church-going, religious men, as well as other men who are not of the sporting type, were very anxiously waiting to know whether a man of thirty-seven could get back into training and compete with a man thirteen years younger. They all hoped, we imagine, that Willard would win, in order to bolster them up in their theory that they could, if needed, come back. There now will be a good deal of disappointment and discouragement among these men past middle life, which is fixed at thirty-seven, for they will remember with mournful regret that anything might happen to them at any time, but even this should not really discourage them.

A man may recuperate and regain his strength at fifty, or more, by judiciously and carefully outlined exercises which are to be carried out daily. Unfortunately, there are comparatively few men who will devote enough time to this sort of exercise. The world is too full of business, of ease, and of pleasure, for men to think of their muscular and nervous systems, but if they neglect their opportunities they have only themselves to blame; further than this, in neglecting their opportunities, they may sometimes bring themselves and their families to want.

It is interesting to note the *Sun's* comment upon the difference between the ideas of ancient Greece and the present ideas in America. In Greece Willard would have been a year short of the ideal age, but in America men are supposed to be efficient experts at nineteen, bank directors at twenty-two, captains of industry at twenty-five, corporation magnates at twenty-nine, and retired ancients at thirty-seven,—ready to be fed their gruel in the inglenooks of the golf club-houses. And, according to these standards, Willard ought to have rheumatism, hardening of the arteries, and a dash of senile debility—and evidently he had.

It hardly seems that the sort of exhibition given on Independence Day could have been a frame-up. If this is so, they chose a very unimportant ground, considering the enormous amount of money that was paid out for tickets to see a fight. At all events, the short period of time before the knock-out of Willard gives rise to a good deal of speculation: Was his defeat financial, prearranged, or normal? The last-named seems most likely. If the crowd, however, finds out that the thing was "fixed up" beforehand, it will require much more expert advertising in the future to attract a similar crowd of fight fans together.

CRITICISMS OF THE MIDDLE WEST

Dr. John Bowman, of Chicago, Director of the American College of Surgeons (a layman, not a medical doctor), in discussing hospital standardization at the meeting of the Southern Minnesota Medical Association, which was held in Roches-

ter, Minnesota, declared that dishonest medical practice is more prevalent in the Middle West than in any other part of the country. This statement we are perfectly willing to challenge. The Middle West has for some time had an idea that corrupt medical practice, fee-splitting, and other like disgraceful performances, are just as prevalent in the Eastern states as they are anywhere in the country, because the competition is greater among men there. And, if this be true, Dr. Bowman has no authority (if he can produce it, we will print it) for making such a broad criticism of the doctors of the Middle West.

The *Minneapolis Journal* took up this subject, evidently thinking it a good thing, for it took the statement to be a severe indictment against the medical profession, and that the exposure of such a practice should bring results,—all of which is perfectly true. But the entire medical profession should not be condemned just because a few physicians and surgeons are dishonest and corrupt. That line of misconduct is prevalent in every known profession, and it is not confined to Minneapolis any more than it is to Boston, New York, or San Francisco. The professions involved in this statement include not only the medical men, but the legal and the theological. There are always to be found among a body of professional men of this kind a few "black sheep" and a few commercialists.

THE JOURNAL-LANCET maintains that, taking the medical profession as a whole in the Northwest, it is composed of a pretty clean set of men. That a few are dishonest goes without saying; and that there are a few more who are wholly commercialistic, is true. But those men, representing, as they do, a few scattered individuals in the profession, are not from the better class of men. We know that for years fee-splitting was a common practice among the surgeons of this type. They were commercialistic men who feared that their efforts would not be recognized, —men who easily fell into the net of bribery. These men obtained a certain prominence, if one may dignify an unprofessional bit of conduct with prominence in medicine,—that is, these men gained a foothold and established themselves as surgeons, justly or unjustly; but they soon found that the localities from which their patronage came did not keep up the supply, because the man who brought a patient and demanded a split fee from the surgeon became excessive in his demands, and soon took his patients where he could get more money. This was a shameful and disgraceful condition, but it existed. In time some of the commercialists and fee-splitters suddenly decided to reform, for they found that they were known and that they could not secure admission to prominent national organizations on account of their misconduct, therefore they eventually prided themselves upon being good, but in their hearts they would have been glad again to split a fee.

The *Minneapolis Journal,* in its editorial, discussed a case of incompetency in Minneapolis, due to an absolutely incorrect diagnosis. This, of course, is not a very dignified method of expression, because there are many men, and good men, who sometimes make an incorrect diagnosis.

Perhaps the *Journal* is referring to a class of people who belong to the "vampire" element. These people call in doctor after doctor; they take up his time, and they refuse to follow his advice; and when the doctor declines to have anything further to do with them, they think they are neglected. They soon find another doctor, and pay no one. Usually, these people are deficient or dishonest (both perhaps), and the result is they soon become known as "workers" of the medical profession. We have a case in mind now, where a woman called upon many doctors, one after the other, and each doctor found the same state of affairs,—domestic difficulties, with household responsibilities that could not be met, and entire refusal on the part of the patient to carry out the doctor's instructions, as well as inability on the part of the relatives and friends to make her do so. We think if people knew how very inconsiderate some of these "vampire" and supposedly sick people are, there would be a little more consideration shown the doctors.

In spite of everything, however, there are faults to be found with physicians, as well as with lawyers, and perhaps with journalists. But, even so, the profession is gaining in its morale: it is living up to better standards; it is accepting and adopting the newer methods of investigation; and it is making much better diagnoses than it made five, ten, or fifteen years ago. This is due in part to the laboratory service offered by the hospitals, due equally in part to the younger man who comes up with fresh ideas and stimulates the older man to better work, and, in a large part, to the elimination of the old commercial medical school, which has gone out of existence, largely because of the efforts of Abraham Flexner.

The *Journal* says, in this editorial, that there are too many medical schools that are not thorough, but purely commercial. This is a statement that is hardly borne out by facts. As a matter of fact, there are now too few medical schools that are highly organized to supply the people with physicians. Dr. Bowman himself has said that the number of internes in all the medical schools is not sufficient, by several thousands, to supply the demands of the hospitals. And, so far as the commercial medical schools are concerned, at the present writing they are few in number and poor in their work.

MORTALITY OF WOUNDS OF THE SKULL AND DURA

We have no access as yet to the number of cases of wounds of the skull, including the dura, that occurred in the war. Approximate figures have been given out, but it is yet too early to know definitely, except that Dr. Harvey Cushing observed during his service abroad that 60 per cent of the injuries to the head caused death, and that the remaining number who were injured and did not die, underwent recovery to a certain degree. Not all wounds of the dura or wounds of the skull produced death, although it was assumed that most of the cases in which the dura was punctured or injured would either die or suffer permanent symptoms which would demand the resources of the Rehabilitation Department. There were repeated instances of splintering of bone, and in some instances the splintered bone, instead of being thrown out of the skull and scalp, would disappear into the substance of the brain. Some of these cases were operable, and it was possible to pick out from these gaping wounds spiculæ of bone which had done more or less destructive work.

It was possible also for the expert radiographer to locate foreign substances, such as bits of shrapnel, to an extreme degree of precision. For instance, the *x*-ray man would take a radiograph of a skull, and then indicate in his report the number of centimeters in the brain substance from above and from one side the foreign body; and in a few instances recorded the surgeon was able to follow his instructions with great accuracy, and locate and remove the foreign substance.

Some of the men suffered from plowed wounds of the skull. The bullet or shrapnel missile striking on the surface of the skull would make a deep channel, causing compound and comminuted fractures, tearing of the membranes, and destroying the superficial areas of the cortex. One case that the writer has in mind was that of a young man who was injured in this manner, and was operated on at one of the best hospitals and by one of the best operators within a few hours of his injury. Apparently, the soldier was progressing nicely until the fortieth day, when he developed a convulsion and a left-sided hemiplegia. Doubtless, there are numerous other injuries of this type that developed later symptoms or recovered sufficiently from their wounds to be discharged. Some of the minor injuries of the skull were, of course, unaccompanied by disabling symptoms, and the individual was able to go back to the front and resume his position in the firing-line.

Digressing from the title of the editorial, one could write at length on the peripheral-nerve injuries, of which there were all sorts and conditions. Many of these cases suffered from paralysis of groups of muscles or disturbances of sensation, and some of them, particularly high injuries, made it difficult often to differentiate between a peripheral and a central lesion. Then, too, there are a number of contra-coup injuries. For instance, a man presenting himself may be paralyzed on the left side from a wound in the left side of his head. This, of course, was looked upon as an unusual condition, unexpected paralysis, but under radiography it was found that the actual seat of the injury was a bullet or bit of shrapnel which had passed through the original wound, and lodged in the pyramidal tract system in the opposite hemisphere, thus showing the actual injury caused by the missile. These gunshot wounds of similar type have been seen in civil practice many times, consequently there can be no dispute of the cases of contra-coup injury.

Many of these interesting cases will be published later by various writers and observers at the front, so that our knowledge of injuries to the nervous system will be intensified, and many of the seemingly unusual paralyses and wounds will be cleared away by the modern methods adopted in the army.

BOOK NOTICES

THE OPERATIONS OF OBSTETRICS. Embracing the Surgical Procedures and Management of the More Serious Complications. By Frederick Elmer Leavitt, M. D., formerly Assistant Professor of Obstetrics and Gynecology, University of Minnesota; Obstetrician to the City and County Hospital, The St. Paul Hospital, The Bethesda Hospital, etc., St. Paul, Minnesota. With 248 illustrations. Price $6.00. St. Louis: C. V. Mosby Co., publishers.

But little in the way of criticism and much of commendation can be said of this book.

The chapter on "Anesthesia" should have made mention of gas-oxygen, which is coming into more general use daily. On the other hand, the depiction of the laminaria tents and a description of their use would have better been omitted, as they are obsolete in obstetrical practice.

The author takes a sane view of the use of pituitary extract, limiting its employment to the second stage of labor and post-partum conditions.

The indications for and the descriptions of the various obstetrical operations are clearly stated and beautifully illustrated, most of the engravings being from drawings made by the author.

The completeness of the index will be much appreciated by the busy man or the one who in an emergency wishes to get help in a hurry. In the preface Dr. Leavitt has modestly expressed the hope that "the general practitioner, as well as the specialist in obstetrics, will find the book helpful." This hope will certainly be realized. —C. G. WESTON.

PHYSIOLOGY AND BIOCHEMISTRY IN MODERN MEDICINE. By J. J. R. Macleod, M. D. Price, $7.50. St. Louis: C. V. Mosby Co.

This is one of the really valuable recent books. Application of the newer physiology and biochemistry to clinical medicine is discussed in a manner suitable to both the laboratory worker and the clinician.

Dr. R. G. Pearce, of Lakeside Hospital, Cleveland, is one of the collaborators, and he contributes one of the most interesting chapters relating to the clinical determination of respiratory interchange in man. This method of calculating the energy metabolism of the body has been found to compare favorably with others now in use and is especially suitable for clinical work.

The section dealing with metabolism of the food stuffs, together with the bibliography, is of greatest value.

The chapter on the clinical application of electrocardiography is another article worthy of especial mention. —T. A. PEPPARD.

SURGICAL TREATMENT. A Practical Treatise on the Therapy of Surgical Diseases for the Use of Practitioners and Students of Surgery. By James Peter Warbasse, M.D., formerly Attending Surgeon to the Methodist Episcopal Hospital, Brooklyn, New York. In three large octavo volumes, and separate desk index volume. Volume III contains 861 pages with 864 illustrations. Philadelphia and London: W. B. Saunders Company. 1919. Per set (three volumes and the index volume), cloth, $30.00.

This volume contains 800 pages, covering miscellaneous subjects from liver and gall-bladder, appendix, hernia, genito-urinary organs, extremities, etc., to first aid and bandaging.

Inguinal hernia is sufficiently described for the average herniotomy.

In connection with proctoclysis, it is rather interesting that sea-voyagers are advised not to go to sea without a knowledge that they may relieve their thirst in case of necessity by an injection of sea water. It might be an advantage in this connection to have each carry along a baby syringe and some vaseline.

The illustrations used, though numerous, generally do not show the anatomy of the parts in their normal relations as clearly as they should. Students of surgery would often have difficulty getting the steps of an operation from the brief description of these drawings.

More complete descriptions should have been given of the big subjects of surgery, for example, hernia, liver and gall-bladder, and appendix, and less to minor surgical subjects. It is better to leave a subject out than to treat it incompletely.

The treatment of diseases of the genito-urinary organs, male and female, is given more space than usual in a general surgery, and considerable space is taken up with medical treatment.

It is frequently stated that causes of symptoms should be searched for and treated and corrected. This being the object of medicine and surgery, such statements are superfluous. They constitute "filling" and, though common in medical texts, should be eliminated.

The subject of amputations is thoroughly treated, as also is bandaging.

The subject of first aid is treated very superficially, and consists mostly of old stock drawings.

The author states that this treatise is intended for practitioners and students of surgery. I cannot recommend Vol III to either, though it can be used by surgeons as a reference on certain subjects.

—P. F. BROWN.

THE MEDICAL CLINICS OF NORTH AMERICA, Volume II, Number III (The Philadelphia Number, November, 1918). Octavo of 275 pages with 46 illustrations. Philadelphia and London: W. B. Saunders Company. 1919. Published Bimonthly. Price per year: paper, $10.00; cloth, $14.00.

The Philadelphia number of the Medical Clinics of North America devotes nearly half of its pages to influenza and its complications.

1. Dr. Alfred Stengel gives a comparison of the 1918 epidemic with those of 1889-90, which he observed during his interneship.

2. A composite picture of the 1918 epidemic as seen in an active bedside practice is shown by Dr. David Riesman. He makes no attempt at statistics, but gives examples and impressions gained. He outlines the methods that should be used in case of a later outbreak of the epidemic, among them a zone system for doctors. "To be guilty of unpreparedness in the future would be a municipal crime."

3. Records of cases of pulmonary complications of influenza are reported by Dr. H. R. M. Landis.

4. Dr. John B. Deaver has treated thirty-five cases

of influenzal empyema by drainage and by Dakin's solution.

5. The pathological findings and the bacteriology of the epidemic are discussed by Lieut. Eugene A. Case and by Dr. R. C. Rosenberger.

6. Dr. Chas. W. Burr describes the mental complications and sequelæ of the disease. He considers the outlook for complete recovery from postinfluenzal neurasthenia and psychasthenia to be absolutely good, but most serious in the cases in which influenza hastens and precipitates the occurrence of insanity, as dementia precox.

7. Dr. J. Leslie Davis suggests that the unusual atmospheric conditions present over the whole earth during the past two or three years may have changed the chemistry of tissues of the body, making the mucosa of the respiratory tract less resistant than normally to the bacteria present and that the epidemic of influenza may have been due to the action of bacteria under disturbed atmospheric conditions in the same way that souring of milk is favored by a thunder storm.

8. For children who have had influenza, Dr. M. Ostheimer insists on a prolonged convalescence of two or three weeks. In another article he gives a very condensed and practicable discussion of the feeding of babies during the second year.

9. Dr. J. P. Crozer Griffith shows photographs and röntgenograms to illustrate the several types and causes of dilatation of the colon in children.

10. The various types of cerebral palsies in children are differentiated by Dr. Charles S. Potts, and the indications for operation are considered.

11. Dr. Thomas McCrae emphasizes the variety of causes of sciatica and the importance of finding the cause in each case.

12. The success of the combined intravenous and intraspinal methods of treating syphilis is reported by Drs. Schamberg and Strickler. Paresis cannot be cured unless treatment is begun at an early stage, and so they advise the routine examination of the spinal fluid in all cases of syphilis to detect the preparetic stage.

13. Dr. S. D. W. Ludlum finds by testing the body secretions of his mental patients with litmus that some have an acid diathesis and are improved by the administration of alkalis and some with an alkaline reaction predominating react markedly to the administration of dilute hydrochloric acid.

14. Dr. E. H. Funk reports two unusual chest cases and five cases of tuberculosis complicating pregnancy.

15. The use of the duodenal tube for the diagnosis and the treatment of biliary affections is advised by Dr. Martin Rehfuss. He has used autogenous vaccines from cultures so obtained in the treatment of chronic infections of the gall bladder and discusses the failures as well as the successes.

16. Dr. Leon Jonas gives methods and interpretation of blood and urine findings in diabetes, and emphasizes the necessity of these studies in the treatment of diabetes.

17. Röntgenograms and discussions of a number of chest cases are given by Dr. David R. Bowen. The diagnosis of no intrathoracic condition can be complete if *x*-ray study has been omitted. Team work between clinician and röntgenologist gives better results than individual and independent study by either alone.

—Olga S. Hansen.

NEWS ITEMS

Minneapolis has been having free anti-tuberculosis movies in the public parks.

Dr. E. Haberman, of Osakis, has returned from medical service at Camp Custer, Mich.

The Tri-County Tuberculosis Sanatorium at Lake Julia is to receive $36,000 for improvements.

Dr. W. F. Keller, of Sioux Falls, S. D., has been appointed a member of the city's health board.

Dr. Donald K. Woods, of Great Falls, Mont., is home from France, and has resumed his practice.

Dr. Carl Cowin, of Minneapolis, is home from France, and has resumed his work with Dr. W. B. Murray.

Dr. T. S. Paulson, who lost his wife in the cyclone at Tyler a year ago, was in the Fergus Falls storm.

Dr. Gilbert J. Thomas, of Minneapolis, who was a major in Base Hospital Unit 26, has returned from France.

The summer school conducted by the Medical School of the University of Minnesota, has an attendance of 167 medical men.

Dr. William Gamble, who has just been discharged from the army, has become associated with Dr. J. E. Crewe, of Rochester.

Physicians are not allowed under the "bone-dry" laws to prescribe an amount of liquor exceeding a ten-day supply for a patient.

Work has been begun on the new $50,000 addition to St. Vincent's Hospital at Crookston. The addition will contain thirty rooms and a chapel.

"The North Pacific Pediatric Society" was organized at Portland, Ore., last month. Dr. E. J. Huenekens, of Minneapolis, was present at the organization.

Dr. Bernard Sorose, formerly of Detroit, has just returned from France, and has become a resident physician at St. Barnabas Hospital, Minneapolis.

Dr. Arthur A. Law, who was lieutenant colonel with Base Hospital No. 26. has just received the distinction of a citation by General Pershing for his services.

Dr. H. L. Williams, of Minneapolis, has been appointed chief medical officer of the Ninth District Board for Vocational Education of Soldiers, Sailors, and Marines.

Dr. F. L. Kling, of Milaca, has purchased the hospital equipment used by the Red Cross of Milaca last year, and plans to use the same in a hospital in that village.

A general invitation is extended to the annual meeting of the Colorado Congress of Ophthalmology and Oto-Laryngology, which meets in Denver on August 4 and 5.

Dr. C. A. Boreen, of Minneapolis, who recently returned from army service, spoke at the business men's luncheon on the efficiency of prophylaxis against venereal diseases.

Lieut. Col. C. C. Burlingame, formerly assistant superintendent in the Fergus Falls State Hospital, has received additional honors from the French Government for distinguished service.

Minneapolis has a brand new board, called the Board of Public Welfare, which will have charge of the city health department, including the City Hospital. Dr. Mabel Ulrich is a member of the new board.

Dr. Bronson Crothers, of St. Paul, a major in the Medical Corps, has returned after an absence of nearly four years. He was with the British medical corps until 1917, when he joined the American army.

Dr. H. W. Hill, secretary of the Minnesota Public Health Association, was chosen president of the Section of Executive Secretaries of the National Tuberculosis Association at its annual meeting last month.

A bureau of health relief association has been incorporated by the employes of the thirty-five health inspectors of St. Paul. The city contributes about $6,000 a year, and the inspectors will be assessed.

St. Paul health officials are planning to revise the city's laws governing the handling of food in the stores of the city. The protection of bread and fruit from flies is especially desirable and will be provided for.

The Wabasha County Medical Society held its fifty-first annual meeting in Lake City on July 10. Papers were presented by Dr. E. H. Bayley, and Dr. J. T. Bowers, and Dr. G. Schmidt, of Lake City.

Governor Burnquist has appointed the following physicians members of the Minnesota State Board of Health: Dr. O. W. Holcomb, St. Paul; Dr. S. Marx White, Minneapolis; and Dr. A. E. Hedback, Minneapolis.

Supt. G. W. Olson, of the Swedish Hospital, of Minneapolis, makes a vigorous plea in the daily press for maintenance of the "quiet zone" around hospitals established some years ago by the Minneapolis City Council.

The Minnesota State Board of Health did not elect a successor to Dr. H. M. Bracken, resigned, at its meeting last week, but postponed the election to September 1. Dr. Bracken was given a leave of absence till that date.

Capt. J. C. Jackman, of Minot, N. D., is still in Brest, France, but is expected home this month, and upon his return will resume practice in Minot. The report that he had returned and located in Illinois was erroneous.

The Minnesota law for licensing maternity homes has been declared unconstitutional by the supreme court on the ground that the act covers two subjects. Maternity homes cannot now be regulated by the Board of Control.

The French Government has conferred upon Dr. Walter Ramsey, of St. Paul, a gold medal for his services in the care of the children of Northern France. Dr. Ramsey was commissioned major, and sent to Rouen, where he has been working. He has returned to St. Paul.

One of Minnesota's sulphur spring bath institutions has been sued for $3,163 because its resident physician would not permit a new patient to take its treatment until she was in physical condition to do so. Think of a member of an honorable profession taking such a case into the courts!

Dr. Horton Daniels, of Minneapolis, a graduate of the academic department of the University of Minnesota, who also took two years in the Medical School of the University, and afterwards graduated in medicine from Columbia, sails in August for China as a medical missionary for the Presbyterian Board of Foreign Missions.

Dr. Arthur H. McCray, Director of the Hygienic Laboratory of the Montana Department of Public Health, died at Helena on June 14, from spotted fever contracted from experiments on which he was working. Dr. McCray was a graduate of George Washington University Medical School, of Washington, D. C., and was thirty-six years of age.

The following officers were elected at the annual meeting of the North Dakota State Medical Association: President, Dr. W. P. Baldwin, Casselton; first vice-president, Dr. H. E. French, University; second vice-president, Lieutenant Colonel E. P. Quain, Bismarck; secretary, Dr. H. J. Rowe, Casselton; treasurer, Dr. W. F. Sihler, Devils Lake; delegate to the A. M. A., Dr. E. A. Pray, Valley City. The 1920 meeting will be held at Minot.

Dr. A. J. Huenekens, of Minneapolis, spoke twice before the Oregon State Medical Association at its recent annual meeting in Portland, once giving a scientific paper and the second time speaking, under the auspices of the Association, at a public meeting. The State of Oregon is considering the establishment of infant-welfare clinics along the lines begun by the Child Conservation Division of the Minnesota State Board of Health, of which division Dr. Huenekens is the chief.

PHYSICIAN WANTED

The village of Rushmore, Minn., wants a physician to locate there. The country is rich, and a good man will be given loyal support. This is an excellent opening. For particulars, address Mr. W. C. Thom, care of the First National Bank, Rushmore, Minn.

YOUNG PHYSICIAN WANTED

A long-established physician in a village of 1,000 population in Southern Minnesota wants a young man to assist him. Will pay a fair salary for first few months, followed by an equitable part of the income, with still better prospects if person is satisfactory. Address 258, care of this office.

PRACTICE FOR SALE

I am obliged to sacrifice my practice on account of ill health. It is a $10,000 general country practice in Southern Minnesota. The village has 1,000 people, and the country round it is very rich. It does not require much cash for the right man to buy it, and there will be no misrepresentations about it. Address 261, care of this office.

ASSISTANT WANTED FOR EYE, EAR, NOSE AND THROAT WORK

Assistant in a large eye, ear, nose, and throat practice. Must be young, a good worker, and have experience in eye and ear work. Partnership later to right man. Give complete information concerning qualifications, languages spoken, etc., in first letter. Address 246, care of this office.

LABORATORY TECHNICIAN WANTED

A private hospital in North Dakota wants a young woman for laboratory work. Experience and references required. Address 256, care of this office.

PRACTICE FOR SALE IN MINNESOTA

I offer for sale a $10,000 practice in a Minnesota city of 1,500 which has a hospital. Will sell residence and office and hospital equipment, or will retain the residence. Price very moderate. Reason for selling: I am going to the city. For any information desired, address 260, care of this office.

POSITION AS LABORATORY TECHNICIAN WANTED

By a young woman, in a hospital or with a group of doctors, preferably in the Twin Cities. Routine laboratory work; experienced in tissue work; have assisted in making Wassermans; best of references. Address 254, care of this office.

POSITION AS LABORATORY TECHNICIAN WANTED

By a graduate of the University of Minnesota, who is prepared to do blood chemistry, urinalysis, bacteriological work (Wassermanns, if necessary), and all routine experiments with the exception of tissue work. Address 253, care of this office.

PRACTICE FOR SALE

Minnesota $5,000 practice for sale, with only distant competition, still thickly settled, good roads and about 99 per cent collectible. All doctors that have been located here made money from the start. No real estate; only drugs, instruments and office fixtures. Address 250, care of this office.

PRACTICE WANTED: PARTNERSHIP OR OTHERWISE

A graduate of an A+ school, with an experience of five years in general practice and two years in the army (1 year abroad with rank of major) wants to locate in a city of 3,000 to 5,000 or larger. The best of references, professional and business, will be furnished. Can speak German well. Will accept partnership or purchase practice. Address 259, care of this office.

INSTRUMENTS, OFFICE EQUIPMENT AND PHYSICIAN'S RESIDENCE IN MINNEAPOLIS FOR SALE

The instruments, the office equipment, and residence of the late Dr. W. A. Hall are offered for sale separately or together. The residence on Lowry Hill is unexcelled in location and is a commodious, handsome colonial building of the highest grade construction. It will be sold for a price much below its value. For information address or call upon Mrs. W. A. Hall, 1777 Colfax Ave. So. Telephone, Kenwood 179.

PUBLISHER'S DEPARTMENT

THE HARVARD X-RAY LABORATORY

Sinus and dental radiography is done exclusively by this laboratory, and is done in a manner quite unrivaled in the Northwest.

The laboratory is patronized by our best men, and its work always gives satisfaction. It is worthy the utmost confidence, and its prices are moderate.

HORLICK'S MALTED MILK

Horlick's has become a national beverage, and yet its real value is scarcely appreciated by medical men. It can well be prescribed almost daily by the busy physician. For the tired man at night, nothing excels it. For the invalid, the convalescent, indeed for the sick is both food and medicine. For the baby giving up mother's milk nothing is so palatable and strength-giving.

ERGOAPIOL (SMITH)

Ergoapiol is recommended in several varieties for amenorrhea and dysmenorrhea. It has a marked analgesic and sedative effect upon the reproductive system without the injurious effects of an anodyne. It also acts promptly.

It is put up in capsules, and is manufactured by the Martin H. Smith Co., of New York City, who will be glad to send literature and samples to any physician.

THE MEDICAL PROTECTIVE COMPANY

A company engaged in insuring physicians against damage suits for malpractice commends itself by its policy and its practice.

The Medical Protective Company of Fort Wayne, Ind., has a policy so simple, so broad, and so liberal as to be well-nigh perfect; and it has not a single blot upon its reputation in its dealings with the profession. It agrees to do all that can be expected of such insurance; and it has never failed to do it to the satisfaction of its clients.

CAMPHO-PHENIQUE

Campho-Phenique is an antiseptic dressing for wounds, burns, scalds, skin lesions, chancres, etc. It has maintained the confidence of the medical profession for a great many years; and a trial of it readily convinces the physician or surgeon that it is a superior dressing for all kinds of wounds, ulcers, etc., where an antiseptic is needed.

Samples will be sent free upon request by the Campho-Phenique Company, St. Louis, Mo.

MUDCURA SANITARIUM

When Dr. H. P. Fischer, of Shakopee, a few miles from the Twin Cities, took hold of the Shakopee sanitarium it was a small institution with small quarters and accommodations. It now has a capacity of 100 patients, and is conducted in a manner that has commended it to the profession for many years.

It is doing an excellent work in the care of a very large class of cases in which its treatment is indicated; and the results obtained by the treatment should commend it to all medical men.

THE MINNEAPOLIS SANITARIUM

The Minneapolis Sanitarium is an institution where doctors send their acute or chronic medical cases, including nervous and mental, for treatment under their own care or that of physicians they select. Drug addicts will be taken care of in the Sanitarium, with or without the supervision of the physician sending them.

Mr. J. J. Baker, the manager of this home-like sanitarium, receives patients from most discriminating men in the profession, and he has enjoyed their confidence for many years.

For full information, address the Minneapolis Sanitarium, 1500 Elliott Ave., Minneapolis.

NUJOL

Nujol is both the common-sense and the scientific remedy for mechanical constipation. It is not a medicine, as we ordinarily define a medicine. It is a lubricant, and it is one that acts directly and efficiently upon mechanical obstruction, which causes 90 per cent of all cases of constipation.

The doctor who is not familiar with Nujol is well-nigh a back number.

Nujol is manufactured by the Standard Oil Co., and is in no sense a patent medicine or one whose qualities are exaggerated.

Try Nujol, and you will be convinced.

MAKING REAL PHARMACEUTICALS

There is no more honorable house in America than that of Sharpe & Dohme, and its pharmaceuticals have long been held unsurpassed by any made at home or abroad.

The truth of the above strong statement is demonstrated by the experience of the profession with this house for nearly sixty years. The value of such conscientiousness in the handling of practically all the standard drugs and their combinations used by physicians, is very great, for a physician cannot afford to use anything that is inferior in quality. The name is the guarantee.

ARMOUR AND COMPANY TO INVESTIGATE THE PHARMACEUTICAL SITUATION ABROAD

F. M. Bell, head of Armour and Company's pharmaceutical department, sailed recently for Europe where he will study business conditions and get an inside viewpoint of the general pharmaceutical activities in foreign countries. Mr. Bell's visit, which will last approximately two months, will include trips through England, France and Italy.

Armour and Company's line of pharmaceutical goods, which is well known in medical circles, has been under the direction of Mr. Bell for many years.

"HE GOT MORE THAN HE EXPECTED"

A doctor who purchased an Ultima No. 3 Sinustat, manufactured by the Ultima Physical Appliance Co., 136 West Lake St., Chicago, Ill., wrote in to the manufacturers as follows:

"Before securing the Sinustat No. 3 I was advised it was only a small machine, without enough force to do any good. The advice was not sound. My No. 3 machine has all the force I need. Can send a current through any part of the body, and have never used all

its force at any one time. I am pleased with it. It is a good investment. You have done the profession a good turn in putting these machines on the market."

NEW BOOKS—STANDARD BOOKS

Two Twin City men have recently contributed to the profession, through the C. V. Mosby Co., of St. Louis, as publishers, two new books which are sure to become standard books, Dr. Frederick E. Leavitt, of St. Paul, giving us "The Operations of Obstetrics," a six-dollar volume, and Dr. R. T. La Vake, of Minneapolis, "Talks on Obstetrics," a valuable but small contribution, selling for $1.00.

The Mosby Company are favorites with Western authors, and with both Eastern and Western readers. They publish few books that are not really standard works because of real merit.

NATIONAL PATHOLOGICAL LABORATORIES

The double-page announcement made in our advertising columns by the above-named laboratories, is a striking illustration of what valuable aid the commercial laboratory has brought to the medical profession, and also of the tremendous growth of this particular laboratory, which now gives a real national service with its offices in four of the largest cities in the country.

The National Pathological Laboratories are doing a genuine service for medical men everywhere, and their usefulness to both the city and the country physician cannot well be overestimated.

Their service is worth having and using continuously.

FIRST AND SECURITY NATIONAL BANK

A "big" friend is the most essential asset of every physician, for such a friend will help him and his family in the inevitable day of need, which comes, if not earlier, more suddenly to physicians, than to any other class of professional men.

The above-named bank actually seeks to become the "big friend" of every physician by way of giving him invaluable financial advice upon every business transaction he may have under consideration. This advice will be wholly disinterested, and so conservative as to be well-nigh infallible in its safety.

We earnestly ask physicians of Minneapolis and outside of Minneapolis why not seek such gratuitous and valuable advice. Ask the First and Security Bank about it.

THE SOUTH SIDE SANITARIUM

The editor of The Journal-Lancet has two hobbies: one is editing a medical journal, and the other is conducting a private hospital for mild mental cases. The work of the one is not altogether unlike that of the other, at least in its exacting qualities.

The South Side Sanitarium is confined to a specific work, and its number of patients is limited to twenty, which enable the managers to give every patient the full amount of care demanded by his or her condition, to maintain in the hospital a uniform standard of excellence at every point, and make certain that neglect at any point shall not be excusable.

The appointments of the building, the grounds and the whole surroundings are admirable.

For terms and admission, address the South Side Sanitarium, 1400 Ninth Avenue South, Minneapolis.

ANTITYPHOID VACCINE

It has been estimated that the purification of all water supplies, perfect sewering or rigid screening and supervision of out-door closets would result in the reduction of the annual typhoid-fever rate to a figure less than 14 per 100,000.

Further reduction to the residual typhoid horizontal must be attained by thorough supervision of all cases of typhoid fever, protection of milk and other food supplies from typhoid bacilli, destruction of flies and their breeding-places, control of typhoid carriers, and the use of *antityphoid vaccine*.

The conclusion is therefore obvious that antityphoid vaccination establishes in the individual a relatively high resistance at least, and, while it is true that this resistance may be overcome by a massive and continuous ingestion of the typhoid organisms, it remains the most valuable personal prophylactic measure that we possess. It is now entitled to take its place along side of smallpox vaccination and diphtheria and tetanus antitoxin administration.

Its use should therefore be stimulated by every possible means. In particular no one who is especially exposed as are nurses, doctors, and persons who travel about should neglect this measure of protection against a chance infection. The physician who assists in this propaganda by urging antityphoid vaccination upon his clientele will find in the Eli Lilly & Co. typhoid and typhoid mixed vaccines prophylactic agents whose use will justify the procedure in the results of many others thus increasing the growing circumference of its application among civilians, and final elimination of the disease.

ALKALOL IS HYPOTONIC

The only doctor who has not a good word to say for Alkalol is the doctor who has not used it. Because, Alkalol is something different. While it exerts antiseptic action, it is not an antiseptic solution in the ordinary sense of the word. Neither is it, as some physicians believe, merely a normal salt solution. Nor, on the other hand, is it to be regarded as a mere mouth wash or gargle.

Alkalol is a preparation which is physiologically adapted for the treatment of all irritation or inflammation of mucous membranes, or of the skin. Alkalol is not isotonic, but hypotonic, which means that its specific gravity is less than that of the blood. It possesses the proper alkalinity as well as the correct salinity. It contains those physiological salts which are absolutely necessary for cells that have been depleted as a result of hyperactivity induced by irritation or inflammation. Being hypotonic, Alkalol reverses the osmotic current and allows such salts to pass into the cells, instead of stimulating an outflow of such salts from the cells. Consequently, Alkalol feeds the cells and helps them to help themselves. It matters not, if the inflammation be of the conjunctiva or of the nasal mucous membrane, or whether the inflamed part be the throat, the urethra, the bladder or the skin, an application of Alkalol properly diluted, which means not over 50 per cent, will bring beneficial results so quickly as to impress the most skeptical medical man. Every physician who has not tried Alkalol should do so and for this purpose will be sent interesting literature and a sample of the product by writing to The Alkalol Co., Taunton, Mass.

THE
JOURNAL-LANCET

Represents the Medical Profession of
Minnesota, North Dakota, South Dakota, and Montana
The Official Journal of the
North Dakota and South Dakota State Medical Associations

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TRANSACTIONS OF THE SOUTH DAKOTA STATE MEDICAL ASSOCIATION—THIRTY-EIGHTH ANNUAL MEETING 1919

OFFICERS AND COMMITTEES

PRESIDENT
ROBERT D. ALWAY, M. D.....Aberdeen

FIRST VICE-PRESIDENT
H. T. KENNEY, M. D.....Pierre

SECOND VICE-PRESIDENT.
G. S. ADAMS, M. D.....Yankton

SECRETARY-TREASURER
FREDERICK A. SPAFFORD, M. D.....Flandreau

COUNCILOR—FIRST DISTRICT, AND PRESIDENT OF THE COUNCIL
WILLIAM EDWARDS, M. D.....Bowdle

COUNCILOR—SECOND DISTRICT
C. S. O'TOOLE, M. D.....Watertown

COUNCILOR—THIRD DISTRICT
N. K. HOPKINS, M. D.....Arlington

COUNCILOR—FOURTH DISTRICT
T. F. RIGGS, M. D.....Pierre

COUNCILOR—FIFTH DISTRICT.
L. N. GROSVENOR, M. D.....Huron

COUNCILOR—SIXTH DISTRICT
FREDERICK TREON, M. D.....Chamberlain

COUNCILOR—SEVENTH DISTRICT
G. G. COTTAM, M. D.....Sioux Falls

COUNCILOR—EIGHTH DISTRICT, AND SECRETARY OF THE COUNCIL
JAMES ROANE, M. D.....Yankton

COUNCILOR—NINTH DISTRICT
F. E. CLOUGH, M. D.....Lead

COUNCILOR—TENTH DISTRICT
H. R. KENASTON, M. D.....Bonesteel

MEMBER OF HOUSE OF DELEGATES, AMERICAN MEDICAL ASSOCIATION
H. J. G. KOOBS, M. D.....Scotland

ALTERNATE
J. F. D. COOK, M. D.....Langford

PROCEEDINGS OF THE HOUSE OF DELEGATES

FIRST SESSION, MAY 20, 1919

The House of Delegates met in the parlors of the Hotel Lincoln at 5 P. M.

The following members responded to roll-call: Dr. D. L. Scanlon, President; Dr. P. D. Peabody; Dr. J. F. D. Cook; Dr. F. W. Freyberg; Dr. C. S. O'Toole; Dr. H. J. Bartrom; Dr. M. E. Cogswell; Dr. Jno. Freeman; Dr. Wm. Edwards; Dr. L. N. Grosvenor; Dr. R. D. Alway.

The President called for reports from the following committees: Public Health and Education, Medical Corps, Hospitals, Medical Journal, and Insurance.

Dr. Spafford, Chairman of the Medical Corps Committee, made the following report:

I have no formal report to make to the House of Delegates. You all know full well what has been accomplished by the medical profession of the State of South Dakota in sustaining the Surgeon General's office in all the medical war activities in which we have been called upon to assist. Nearly two hundred of the best men in the medical profession of the state have cheerfully answered the call, given up large, lucrative practices, accepted commissions, and responded to their orders. Nearly five hundred physicians in this state, in one way or another, have been connected with war work, either in the Medical Corps, U. S. A., or attached to some one of the various Local and Medical Advisory Boards under direction of the Provost Marshal General's office. The State of South Dakota has reason to be proud of the record of its medical

men in the Great War for the preservation of the "World's Democracy."

Dr. McCauley, Chairman of Committee on Hospitals, reported progress, and requested that the committee be given further time.

Dr. Alway reported that he was unable to make a contract with the Fidelity Guaranty Insurance Company of Maryland, for the reason that he had only twenty-three applicants, while the Insurance Company specified one hundred bona fide applicants.

The Secretary announced the membership of the Association as follows:

Aberdeen (1st) District	104
Watertown (2d) District	36
Madison (3d) District	12
Pierre (4th) District	8
Huron (5th) District	27
Mitchell (6th) District	24
Sioux Falls (7th) District	50
Yankton (8th) District	51
Black Hills (9th) District	37
Rosebud (10th) District	11
Total	360

The President appointed the following Committee on Nominations: Drs. Peabody, Grosvenor, Riggs, Treon, Klima, Freeman, Cogswell, O'Toole, and N. K. Hopkins.

The meeting adjourned.

PROCEEDINGS OF THE BOARD OF COUNCILORS

First Session, May 20, 6 p. m.

The meeting of the Board of Councilors was called to order by the Chairman, Dr. Edwards, in the parlors of the Hotel Lincoln.

The following responded to the roll-call:

Drs. Edwards, O'Toole, Grosvenor, Freeman, Scanlon, Alway, and Riggs.

The Treasurer presented the financial report of the Association for the year.

FINANCIAL REPORT OF THE SECRETARY-TREASURER

Receipts

Balance on hand, May 20, 1918			$1,305.26
May	23, 1918, per capita dues, District No.	7	9.00
May	31, 1918, per capita dues, District No.	4	6.00
June	1, 1918, per capita dues, District No.	3	3.00
June	8, 1918, per capita dues, District No.	2	3.00
June	18, 1918, per capita dues, District No.	6	3.00
July	31, 1918, per capita dues, District No.	4	3.00
Aug.	12, 1918, per capita dues, District No.	7	3.00
Sept.	5, 1918, per capita dues, District No.	5	12.00
Sept.	5, 1918, per capita dues, District No.	9	15.00
Sept.	17, 1918, per capita dues, District No.	8	3.00
Sept.	20, 1918, per capita dues, District No.	2	3.00
Oct.	5, 1918, per capita dues, District No.	3	3.00
Dec.	5, 1918, per capita dues, District No.	1	15.00
Mar.	26, 1919, per capita dues, District No.	10	21.00
Mar.	28, 1919, per capita dues, District No.	4	21.00
Mar.	31, 1919, per capita dues, District No.	5	57.00
April	3, 1919, per capita dues, District No.	7	105.00
April	10, 1919, per capita dues, District No.	9	66.00
April	12, 1919, per capita dues, District No.	1	207.00
April	15, 1919, per capita dues, District No.	3	36.00
Total			$1,899.26
April	17, 1919, per capita dues, District No.	1	12.00
April	17, 1919, per capita dues, District No.	8	117.00
April	17, 1919, per capita dues, District No.	9	9.00
April	17, 1919, per capita dues, District No.	5	3.00
April	17, 1919, per capita dues, District No.	10	3.00
April	30, 1919, per capita dues, District No.	7	15.00
May	6, 1919, per capita dues, District No.	1	12.00
May	13, 1919, per capita dues, District No.	2	66.00
May	15, 1919, per capita dues, District No.	6	60.00
May	17, 1919, per capita dues, District No.	1	42.00
May	17, 1919, per capita dues, District No.	2	18.00
May	17, 1919, per capita dues, District No.	2	3.00
Total			$2,259.26

Disbursements

May	23, 1918, warrant No.	9	$10.00
May	23, 1918, warrant No.	10	9.00
May	23, 1918, warrant No.	11	35.00
May	23, 1918, warrant No.	12	250.00
June	1, 1918, warrant No.	1	5.00
June	18, 1918, warrant No.	2	9.00
June	18, 1918, warrant No.	3	9.00
July	1, 1918, warrant No.	4	140.00
July	8, 1918, warrant No.	5	12.50
Sept.	2, 1918, warrant No.	6	158.85
Sept.	2, 1918, warrant No.	7	4.00
Oct.	14, 1918, warrant No.	8	4.50
Nov.	9, 1918, warrant No.	9	10.00
Jan.	26, 1919, warrant No.	10	150.00
Mar.	11, 1919, warrant No.	11	6.50
Mar.	1, 1919, warrant No.	12	150.00
Mar.	5, 1919, warrant No.	13	172.83
May	10, 1919, warrant No.	14	38.53
May	10, 1919, warrant No.	15	29.50
Total			$1,205.19
Balance			$1,054.07

The Chairman appointed Drs. O'Toole, Grosvenor, and Freeman to audit the books of the Treasurer.

The meeting adjourned.

PROCEEDINGS OF THE BOARD OF COUNCILORS

Second Session—Thursday, May 21

On roll-call the following responded: Drs. Edwards, O'Toole, Hopkins, Riggs, Grosvenor, Freeman, Scanlon, and Alway.

The auditing committee reported that they had examined the books and vouchers of the Treasurer and reported them correct.

The following officers were elected for the ensuing year:

Dr. Edwards, Chairman.

Dr. Roane, Secretary.

The meeting adjourned sine die.

PROCEEDINGS OF THE HOUSE OF DELEGATES

Second Session, May 21

The House of Delegates met at 3 P. M., and was called to order by President Scanlon.

The Secretary called the roll, and the following members responded: Drs. P. D. Peabody, J. F. D. Cook, C. S. O'Toole, J. G. Parsons, J. W. Freeman, E. D. Putnam, William Edwards, N. K. Hopkins, T. F. Riggs, L. N. Grosvenor, and E. H. Grove.

The report of the Committee on Hospitals was called for, and the Committee reported progress.

Dr. L. N. Grosvenor moved that the committee be continued.

Seconded and carried.

The Secretary stated that the Committee on Medical Journal was ready to make its report.

Dr. H. J. G. Koobs stated that at the meeting last year Dr. R. E. Farr, of Minneapolis, appeared before the Association, and proposed that a change be made in the medical journal now publishing the proceedings, the official organ of the Association, and that *Minnesota Medicine* be substituted for The Journal-Lancet.

A committee was appointed to investigate the matter, to make recommendations, and to report to the House of Delegates. Pertaining to this matter, Dr. Koobs stated that some members of the committee were at Minneapolis recently during the Clinic Week, and inquired into the matter somewhat, and since coming to this meeting a similar communication or telegram had been received from Dr. H. Longstreet Taylor, of St. Paul, of the editing and publishing committee of *Minnesota Medicine*, asking that *Minnesota Medicine* be made the official organ of the South Dakota State Medical Association under the conditions which governed the publication of the transactions and papers, the State Association to pay one dollar per capita per year. This, he said, was the same arrangement as the Association now had with The Journal-Lancet.

The majority of the committee, after investigation, wish to report that they do not find sufficient cause for making any change in the very pleasant and eminently satisfactory business relations which have existed between the South Dakota State Medical Association and The Journal-Lancet, which was a very clean, well edited, and carefully printed medical journal. Furthermore, the committee expressed the hope that the Association would vote to continue the same relations with The Journal-Lancet.

Dr. J. F. D. Cook moved that the report of the committee be accepted. Seconded.

After a free discussion by Drs. Parsons, Peabody, Freeman, Edwards, and Scanlon, the motion was put to a vote and carried.

The Secretary stated that according to an amendment to the by-laws offered last year by Dr. Koobs, each district society was requested to tender one or more names to be sent to the Governor as eligible timber for the State Board of Health. Only five districts had responded,

The Secretary read a letter from the Medical Society of the State of New York relative to compulsory health insurance.

The Secretary moved that the Association's Delegate to the American Medical Association be instructed to vote against compulsory health insurance at the coming meeting to be held in Atlantic City, New Jersey.

Seconded and carried.

Dr. J. G. Parsons reported for the Committee on Public Health orally as follows:

I did not receive notification of my appointment on this committee until rather late in the day. As you know, I resigned my office sometime ago, feeling I had served my term in doing work of this kind, covering a period of a number of years.

I have arranged to give a public health address during this meeting, and I am scheduled, I believe, for a popular address at the Methodist Church tonight.

Work of this kind should be continued. Certainly, if we do not make use of the opportunity that we have to enlighten the public in regard to the things they ought to know, the public will suffer and we will suffer indirectly.

I recommended during the last time I spoke before the Association that the Association should have Dr. Herzberg here at Vermillion made chairman of the committee, and efforts should be made to induce the Board of Regents to see that the professor of hygiene of the State University be responsible for propaganda along these lines. That will enable us to get this matter across as it should be. While, personally, I have not had as much time as I would like to devote to this kind of work, still I feel I have done my share of the work, and somebody else ought to get into the game. It is a thankless kind of job, and you do not get far with it. This work should continue, and there should be a committee that will do some of the work along this line, and I am in hopes, since Dr. Spafford has

been tendered an appointment on the Board of Regents, which I hope he will accept, that he will be in a position to help in this matter by reason of his position there.

As to the matter of progress in public health education, I think we have started things going so that there is quite a demand for instruction along these lines, and that the work the county nurses are doing, and the educational campaign carried out against venereal diseases, will be a good thing. Societies should be urged to have organizations of this kind, and each should do its bit and co-operate with local agencies that will further the movement, instead of leaving it fall upon the shoulders of the state committee, which means very few.

The matter of getting the support of the State Board of Health of South Dakota is good. I stand by the plan that I proposed two or three years ago, namely, that we should have some sort of definite program presented to the members of the profession, so that members who have not had occasion to look into the operation of systems of public health can be informed as to what modern health administration consists of. The average medical man does not know anything about public health administration and its machinery in modern times; therefore he ought to be informed. I make no particular pretense of being an expert in this line, but, in connection with my duties on this committee, I have had occasion to get in touch with the leading health authorities in the United States, and have kept myself fairly well informed as to what is being done elsewhere. I believe, as a result of my experience, it is the fair thing to say that our members are not familiar in general with what is going on, and what we really should have here.

I believe it should be the chief duty of the Committee on Public Health and Public Health Instruction to make an investigation as to the public health needs in this state, based upon the advice of those who are competent to give advice to the health authorities of national standing, and should outline a general public health policy which we should have in South Dakota.

This plan might be briefly outlined as follows: General administration of the work to be under the control of a man thoroughly skilled in work of this kind, who knows the game from start to finish, supported by a corps of assistants who are competent to man the different departments of public health work, which are now known to be quite numerous, and we should insist on adequate laboratories for field men, and also insist on the educational side of this work. If we have a commission appointed by the Governor to bring in a recommendation of that kind, and the medical profession know the program which should be carried out because of the information they receive—if a bill of that kind is brought before the legislature, and the medical profession are informed that this bill embodies the essentials which have been determined as being necessary for the South Dakota State Medical Association, they will get behind it and support it. There will not be the cross-firing of individual members.

So far as the legislative side is concerned, I do not want anything to do with it; but I believe we should, at least, take that attitude in regard to the public health situation in South Dakota. I believe that the Committee on Public Health should be continued, and that an appropriation should be made to enable them to carry on the necessary correspondence, and so on, and that the District Societies should be urged to keep up the work as opportunity affords in their several districts.

It was moved and seconded that the report as presented be accepted. Carried.

On motion the House of Delegates adjourned.

Third Session, May 22

The House of Delegates met at 1:40 P. M., and was called to order by the President.

There were present Drs. Parsons, Putnam, Edwards, Grosvenor, and Freeman.

Dr. L. N. Grosvenor presented the report of the Committee on Nominations, as follows:

REPORT OF THE COMMITTEE ON NOMINATIONS

Councilor for the First District, Dr. W. Edwards, Bowdle; Councilor for the Fourth District, Dr. T. F. Riggs, Pierre; President, Dr. R. D. Alway, Aberdeen; First Vice-President, Dr. H. G. Kenney, Pierre; Second Vice-President, Dr. G. S. Adams, Yankton; Secretary-Treasurer, Dr. F. A. Spafford, Flandreau.

Place of next meeting, Sioux Falls.

Dr. Freeman moved that the rules be suspended, and that the President be authorized to cast the unanimous vote for the different members that had been nominated.

Seconded by Dr. Edwards, and carried.

The President then cast the unanimous ballot of the House of Delegates as instructed, and the nominees were declared duly elected.

Dr. J. G. Parsons moved that the next meeting be held in Sioux Falls.

Seconded and carried.

The Secretary stated that the Constitution and By-Laws needed revision.

Dr. Edwards moved that the President-elect appoint a committee to revise the Constitution and By-Laws and report at the next annual meeting.

Seconded and carried.

The President stated that this committee would be appointed later.

The Secretary stated that a Committee on Necrology had been appointed to draft suitable resolutions on deceased members, but no report had been received.

Dr. Parsons moved that the Secretary be instructed to draft such resolutions for publication in the proceedings.

Seconded and carried.

The Secretary stated that the Board of Councilors had not made any appropriation for public

health work. Heretofore the Association had appropriated $100 to defray the expenses of those doing public health work.

He moved that the State be divided into eight or ten districts, and that one member from each district be selected to carry on public health work.

Seconded and carried.

On motion of Dr. Grosvenor the House of Delegates then adjourned.

PROCEEDINGS OF THE GENERAL MEETING OF THE ASSOCIATION

First Session, May 21

The Association met in the Metropolitan Theater, and was called to order at 9:30 A. M. by the President, Dr. D. L. Scanlon.

Dr. B. T. Green, Brookings, read a paper entitled "The Catabolin in Disease." The paper was discussed by Drs. Giere and Koobs, after which the discussion was closed by the essayist.

Dr. J. P. Isaac, Freeman, read a paper entitled, "Pyelitis in General Practice." The paper was discussed by Drs. Peabody, Giere, McCauley, Green, Johnston, and, in closing, by the essayist.

Dr. F. A. Spafford, Flandreau, read a paper entitled, "Lessons to Be Learned from Draft Examinations." The paper was discussed by Drs. Crain, Green, Giere, Peabody, and Hopkins, and the discussion was closed by the essayist.

The President appointed as the Committee on Nominations, Drs. Percy Peabody, C. S. O'Toole, N. K. Hopkins, T. F. Riggs, L. M. Grosvenor, Frederick Treon, J. G. Parsons, H. Klima, J. W. Freeman, and H. R. Kenaston.

On motion the Association adjourned until 2 P. M.

Second Session, May 21

The Association reassembled at 2:15 P. M., and was called to order by the President.

The President, Dr. D. L. Scanlon, Volga, then delivered his address.

Dr. M. C. Johnston, Aberdeen, read a paper entitled, "Military Experiences in Camp." The paper was discussed by Drs. Sprague and Green, and the discussion was closed by the essayist.

On motion the Association adjourned until 9 A. M., Thursday.

Third Session, May 22

The Association met at 9 A. M., and was called to order by the First Vice-President, Dr. G. S. Adams, of Yankton.

Dr. J. M. Walsh, Rapid City, read a paper entitled, "The Leukocyte Count in Chronic Tonsillar Infection." The paper was discussed by Drs. Putnam, Riggs, Grosvenor, and Lillie, and the discussion was closed by the author of the paper.

Dr. J. G. Parsons, Sioux Falls, read a paper entitled, "Oto-Laryngology and the Mortality Rate." This paper was discussed by Drs. Walsh, Grosvenor, Alway, Lillie, Gross, Putnam, and Hall, and, in closing, by the essayist.

Dr. H. I. Lillie, Rochester, Minnesota, read a paper entitled, "The Mastoid Operation." The paper was discussed by Drs. Hall, Parsons, Putnam, Klaveness, Alway, and Isaac, and the discussion was closed by the essayist.

Dr. E. O. Giere, Watertown, followed with a paper entitled, "Myomectomy Versus Hysterectomy." This paper was discussed by Drs. Riggs, Murdy, Sterne, and Mann, and, in closing, by the essayist.

On motion the Association adjourned until 2 P. M.

Fourth Session, May 22

The Association reassembled at 2 P. M., and was called to order by the President.

Dr. Arthur T. Mann, Minneapolis, Minnesota, read a paper (by invitation) entitled, "Empyema and Some of the Surgical Complications of Influenza." The paper was discussed by Drs. Riggs, Giere, Gross, and Sherwood, and the discussion was closed by the author of the paper.

Dr. R. L. Murdy, Aberdeen, read a paper entitled, "Surgical Treatment of Gastric Ulcer."

Dr. Owen King, Aberdeen, followed with a paper on "Medical Treatment of Gastric Ulcer."

These two papers were discussed together by Drs. Ebert, Mann, Koren, and Giere, and the discussion was closed by the essayists.

Dr. M. A. Stern, Sioux Falls, read a paper on "The Operative Treatment of Prolapsus Uteri." The paper was discussed by Dr. H. J. Bartron.

Dr. J. G. Parsons moved that the members of the Association express their hearty appreciation of the entertainments which had been provided for them by the members of the Watertown District Medical Association.

Seconded and carried.

As there was no further business, scientific or otherwise, to come before the meeting, on motion, duly seconded and carried, the Association then adjourned to meet in Sioux Falls in 1920.

R. D. Alway, M. D., *Secretary*.

PRESIDENT'S ADDRESS

By D. L. Scanlan, M. D.,
VOLGA, SOUTH DAKOTA

Fellow members of the South Dakota State Medical Association: I am deeply appreciative of the honor which you bestowed upon me in electing me to serve as your presiding officer; and I desire at this time to express my sincere thanks, not only to you for the honor, but to my faithful co-workers for the loyal support which has been given me during the past year.

It has been a pleasure to serve you at a time when service has been the key-note of action throughout the length and breadth of our land.

Our meeting last year was notable for the spirit of patriotic service which inspired so many of our members to respond to the call of our country. Not less than the boys in the ranks did the medical profession of our state do themselves proud by the record they made in responding to this call. More than a hundred of our best practitioners came to the front, making sacrifices which are well known to us all, and for which we delight to honor them. These sacrifices of time, financial interests, and often of health cannot be estimated in dollars and cents, but they are, to some extent, compensated by the rewards of a sense of patriotic duty well done and by the wonderful experiences which have been the lot of those who were in the army medical service.

Never before in the history of medicine has there been such a remarkable stimulus to medicine in all of its branches. Men from all over the country met in training-camps and hospitals to receive instruction at the hands of eminent teachers. They learned in intensive courses of study things which were of the greatest value to them. They acquired ideals of service, such as never before had been possible. They learned from intimate association with their brother officers the importance of co-operation and to appreciate the other fellow's point of view, both intellectually and ethically. The return to private practice of our members who have experienced these wonderful opportunities cannot fail to bring with it a leavening effect upon the whole profession.

It is for us to think seriously over these things, and so to utilize the new opportunities for the advancement of medicine and of public service which are ours that our fellows who have made these great sacrifices may have the additional reward of seeing the fruits of their labors continue to bless humanity in the years to come.

With the acquisition of these higher ideals of service which have come to us, it is obvious that a new incentive to study is in the air. We are here to give the civilian population the best that is in us, even as our medical officers gave their best to the soldiers in the service. These intensive courses of study in the training-camps have made us realize, as never before, that no practitioner is doing his best, or even his "bit," unless he makes a constant effort to know the best methods of treating disease that are available.

There will doubtless be more postgraduate study than ever before, but we should all realize anew the importance of medical society meetings as stimuli to keep in touch with what is going on and to the constant study of the best medical literature. Each must have such a stimulus to make him keep fit to serve the public.

The growing tendency to team-work and group medicine is something which must appeal to us all as a means of more efficient service. Refinements of diagnosis and a thorough study of cases are things which the public have a right to expect, and, furthermore, which they are beginning to demand. While the specialization which is required for the best team-work is possible only in the larger places, it is at least possible even in smaller communities to have the general practitioners make special studies of certain branches, so that in consultations they may be better able to render real service to the patient.

The problem of how best to accomplish this is worthy of the discussion of a meeting of any district society. The activities of our district societies have necessarily been greatly hampered by the absence of many members in the service, and the extra work required of those who were left at home. With the return of our members from the service, however, we should more than make up for lost time by having well-attended, live meetings, at which these returned medical officers can pass on to us the inspiration which they have received, not only from contact with big men, but from close association with their fellows. Perhaps this last will be the greatest thing that we shall learn from them.

No one can have the experience of close per-

sonal contact with a large number of his fellows without learning to appreciate many of the good things which are theirs, but discoverable only on closer acquaintance. This contact is just the thing which we need in our society meetings. It is not merely to learn new things in medical science that should make us feel it a duty, almost religious in its nature, to attend society meetings regularly; but we should feel it incumbent upon us to lend loyal support to the society because it stands for the best there is in medicine and the best there is in those who practice the profession. We can learn only by association the good there is in each other. In this way alone can we maintain the ideals of service and of ethical conduct which are the glory of organized medicine.

While constantly striving to improve ourselves and advance the interests of the profession we should never lose sight of the fact that we owe a duty to the public, which must be educated by us to know its duty to medicine. The high standards required for license in South Dakota have given us a superior number of practitioners. On the other hand, little or nothing has been done to protect the public from the charlatans and impostors who are thriving as practitioners of the various cults which are short-cuts to the healing art. Our State laws are specific in their statements as to what constitutes the practice of medicine and in the penalties which they impose upon violations of the medical practice act. There is evidently a neglect of duty somewhere or we would be purged of these pests who prey upon the public.

These laws are for the protection of the public, and the public should be taught that it is their duty to demand law-enforcement. Any effort on our part is regarded as the outcome of jealousy, but we can at least point out to the laity that their duty lies in demanding the enforcement of the medical-practice act, which was made for their protection.

The education of the public along public health lines has not been as active as it should have been during the last two or three years, largely due to the lack of support from the American Medical Association, which, through the lack of the necessary funds, due to war conditions, gave up its work along these lines. The time is especially opportune for a vigorous pushing forward of this work. The examination of large numbers of recruits during the war, the campaign against venereal disease, the baby-welfare work, and our recent experiences with the great influenza epidemic have all combined to make the public eager for instruction. We must give it.

The training received by many of our members who were in the service has peculiarly fitted them to be of service to the public in this way, and I would strongly urge that we resume our efforts at public health education.

The need of an adequate public health service still confronts us. Properly to conserve the health of the people of this state we must have a thoroughly organized corps of expert public health workers, supported by an adequate appropriation.

While the memory of war work and the influenza epidemic is still fresh in the public mind we should start educating the people as to these needs. I would recommend that a commission on public health be appointed by the governor for the purpose of studying the needs of our state, and thus offering a tangible basis for the necessary legislative action. A matter of such importance as this is worthy of mention in a message from the governor to the legislature.

In conclusion, may I again express my thanks for the honor which has been conferred upon me, and hope that our deliberations on this occasion may be of such a nature that we shall all leave with the feeling that our time has been well spent and that we have caught fresh inspiration to *service*.

DISTRICT AND COUNTY ROSTER

ABERDEEN DISTRICT MEDICAL SOCIETY—NO. 1

PRESIDENT

Freyberg, F. W.....Aberdeen

SECRETARY

Lavery, C. J.....Aberdeen

Adams, B. A.....Bristol
Adams, J. F.....Aberdeen
Aldrich, H. H.....Wessington
Allen, J. M.....Rosholt
Alway, R. D.....Aberdeen
Baer, T. H. .....Timber Lake
Bailey, F. C.....Redfield
Baldwin, F. M.....Redfield
Bates, W. A.....Aberdeen
Brosseau, J. E.....Frankfort
Brown, A. E.....Webster
Bruner, J. E.....Frederick
Carpenter, G. S.....Bowdle
Carson, D. J.....Faulkton
Carson, O. E.....Hecla
Chapman, W. S.....Redfield
Chase, A. E.....Northville
Chichester, J. G.....Redfield
Cliff, F. U.....Milbank
Cook, J. F. D.....Langford
Countryman, G. E.....Aberdeen
Crain, F. M.....Redfield
Creamer, Frank H.....Dupree
Curtis, J. E.....Lemmon
Deertz, J. J.....Brentford
Devereaux, T. J.....Aberdeen
Dinsmore, W. E.....Claremont
Doupe, J. H.....Wabay
Dunn, J. E.....Groton
Ebert, M. H.....Webster
Edwards, Wm.....Bowdle
Elward, L. R.....Ashton
Farrell, W. D. .....Aberdeen
Field, L. M.....Aberdeen
Fiksdal, M. J.....Webster
Flett, Charles .....Milbank
Freyberg, F. W.....Aberdeen
George, W. A.....Selby
Gerdes, O. H.....Eureka
Harris, H. G.....Wilmot
Hart, B. M.....Onida
Hart, R. S.....Groton
Herman, H. J.....Webster
Herman, J. D.....Conde
Hill, Robert.....Ipswich
Hoagland, C. C.....Veblen
Holmes, A. E.....Aberdeen
Holtz, Louis.....Aberdeen
Homan, C. A.....Aberdeen
Jackson, E. B.....Aberdeen
Jacotel, J. A.....Milbank
Jarvis, Abbie A.....Faulkton
Jenkins, P. B. .....Waubay
Johnston, M. C.....Aberdeen
Jones, R. R. .....Britton
Kaps, F. O.....Britton
Kerns, G. G.....Leola
Kettner, J. C.....Leola
King, H. I.....Aberdeen
King, Owen .....Aberdeen
Kleger, S. A.....Mellette
Kraushaar, F. J.....Aberdeen
Kutnewsky, J. K.....Redfield
Lamb, L. L.....Faulkton
Lavery, C. J.....Aberdeen
Longstreth, W. I.....Sisseton
Lull, Sherman.....Summit
Mayer, R. G.....Cresbard
McAdams, J. E.....Morristown
McCauley, C. E.....Aberdeen
Mertens, J. J.....Gettysburg
Michael, L. F.....Gettysburg
Miller, Frank.....Aberdeen
Miller, J. F. .....Andover
Miller, V. M.....Mellette
Murdy, B. C.....Aberdeen
Murdy, R. L.....Aberdeen
Murphy, T. W. .....Pierpont
Olson, C. O.....Groton
Peabody, H. C.....Webster
Peabody, Percy .....Webster
Peterson, C. M.....Sisseton
Potter, Geo. W.....Redfield
Pugh, G. F.....Wallace
Quinn, J. F.....Mowbridge
Ramsey, E. T.....Clark
Ranney, T. P.....Aberdeen
Rathbun, J. P.....Seneca
Rock, H. J.....Sioux Falls
Rosenthal, S. .....Java
Sargent, C. E.....Isabel
Seeman, C. A.....Tulare
Seeman, H. J. .....Rockham
Senescall, C. R.....Veblen
Smith, W. G.....Hettinger, N. D.
Sornsen, A. A.....Aberdeen
Stegeman, S. B.....Gettysburg
Sutton, Dewey.....Redfield
Totten, F. C.....Lemmon
Twining, G. H.....Mobridge
Van Dalsem, Friede.....Huron
Weishaar, C. H.....Aberdeen
Whiteside, J. D.....Aberdeen
Wilson, R. D. .....Aberdeen

WATERTOWN DISTRICT MEDICAL SOCIETY—NO. 2

PRESIDENT

O'Toole, C. S.....Watertown

SECRETARY

Johnson, A. Einar.....Watertown

Abbott, G. A. .....Watertown
Ash, James C.....Garden City
Bartron, H. J.....Watertown
Bates, J. S.....Clear Lake
Burlingame, R. M.....Watertown
Campbell, R. F.....Watertown
Church, E. O. .....Revello
Edgar, J. D.....Henry
Edsall, J. L. .....Wallace
Finnerud, H. M.....Watertown
Fleiger, A. B.....Willow Lake
Freeburg, H. M.....Watertown
Frink, O. G.....South Shore
Giere, E. O. .....Watertown
Gueffroy, H. A.....Frankfort
Hammond, M. J.....Watertown
Haraldson, O. O.....Watertown
Hendrikson, Paul .....Vienna
Hill, L. G.....Sioux Falls
Johnson, A. Einar.....Watertown
Koren, Finn .....Watertown
Kriesel, W. A.....Watertown
Lockwood, J. H.....Garden City
McIntyre, P. S.....Bradley
Magee, W. G.....Watertown
Mullen, R. W.....Florence
O'Toole, C. S.....Watertown
Parsons, H. C.....Watertown
Richards, G. H.....Clear Lake
Sherwood, H. W.....Doland
Smith, S. W. .....Watertown
Staley, F. H.....Hazel
Tarbell, H. A.....Watertown
Vaughn, J. B.....Castlewood
Westaby, J. R.....Clark
Williams, C. A.....Doland

LAKE PRESTON DISTRICT MEDICAL SOCIETY—NO. 3

PRESIDENT

Frudenfeld, H. H.....Madison

SECRETARY

Baker, J. C.....Lake Preston

Baker, J. C.....Ramona
Eyman, E. V.....Madison
Frudenfeld, H. H.....Madison
Green, B. T.....Brookings
Grove, E. H.....Arlington
Gulbransen, G. H.....Brookings
Hopkins, N. K.....Arlington
Hovde, C. H. R.....Madison
Jordan, L. E.....Chester
Kellog, H. E.....Madison
Lee, James O.....Pierre
Mahin, F. M.....Dow City, Iowa
Noble, A. G.....Howard
Ogle, G. H.....Volga
Scanlan, D. L.....Volga
Torwick, E. E.....Volga
Westaby, R. S.....Madison

PIERRE DISTRICT MEDICAL SOCIETY—NO. 4

PRESIDENT
Martin, H B.....Harold

SECRETARY
McLaurin, A. A.....Pierre

Hollister, C. M.....Pierre
Kenney, H. T.....Pierre
Langsdale. G. H.....Highmore
Martin, H. B.....Harrold
McLaurin, A. A.....Pierre
Minard, R. W.....Midland
Morrisey, R. J.....Ft. Pierre
Riggs, T. F.....Pierre

HURON DISTRICT MEDICAL SOCIETY—NO. 5

PRESIDENT
Taylor, E. B.....Huron

SECRETARY
Grosvenor, L. N.....Huron

Amsberry, A. L.....Carthage
Bostrom, A. E. .....De Smet
Churchill, I. W.....Wessington
Cogswell, M. E.....Wolsey
Cowgill, C. H.....Iroquois
Crafts, Earl .....Carthage
Dyar, B. A.....De Smet
Grosvenor, L. N.....Huron
Hall, C. H.....Huron
Kinsley, W. I.....Miller
Launspach, G. W.....Huron
Leach, W. O.....Huron
Long, G. J.....Ramona
McGarvey, F. B.....Cavour
McKie, J. F.....Wessington
McWhorter, Port.....Miller
Scheib, A. B.....Hitchcock
Schwendener, J. E.....Bryant
Sewell, H. D.....Huron
Sheets, O. B.....Carthage
Shirley, J. C.....Huron
Shull, J. E.....Alpena
Sprague, B. H.....Huron
Taylor, E. B.....Huron
Thomas, Benj. .....Huron
Tschetter, J. S.....Huron
Wood, T. J.....Huron
Wright, O. R.....Huron

MITCHELL DISTRICT MEDICAL SOCIETY—NO. 6

PRESIDENT
Young, E. M.....Plankington

SECRETARY
Gillis, F. D.....Mitchell

Auld, C. V.....Plankinton
Ball, W. R.....Mitchell
Benkelman, W. H.....Stickney
Bobb, B. A.....Mitchell
Bobb, C. S.....Mitchell
Bobb, E. V... .....Mitchell
Bower, Chas. A.....Mitchell
Buffaloe, A. J.....Mitchell
Burns, P. E.....Alpena
Delaney, W. A.....Mitchell
Gifford, A. J. .....Alexandria
Gillis, F. D.....Mitchell
Hoyne, A. H.....Salem
Hunt, W. M. .....Murdo
Jones, E. W.....Mitchell
Kelly, R. A.....Mitchell
Maytum, W. J.....Alexandria
McLellan, S. A.....Kennebec
Rogers, J. C.....White Lake
Smiley, T. B.....Mt. Vernon
Sprecher, Samuel.....Tripp
Treon, Fred.....Chamberlain
Wilson, F. D.....Armour
Young, E. M.....Mitchell

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Hohf, S. M.....Yankton
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Jordan, L. E.....Chester
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Keller, W. F.....Sioux Falls
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Moore, F. A.....Lesterville
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THE RÖNTGEN DIAGNOSIS OF GASTRIC ULCER*

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It is rather stereotyped to say that a knowledge of normal conditions as revealed by the *x*-ray is essential to a proper understanding of abnormal conditions; yet this general truth applies so accurately and specifically to the röntgenology of the stomach that its reiteration is never amiss. Stomachs that are markedly dissimilar in their röntgenologic characteristics may each be appropriate for its possessor and may functionate in a normal manner.

In ascertaining whether or not a given stomach is normal, account must be taken of its length, breadth, capacity, contour, position, form, tonus, mobility, peristalsis, and motility. These numerous and varying factors not only mutually affect each other, but they are also modified by the physique, or body-form, of the individual. Whoever has examined a large number of stomachs röntgenologically, will realize that definite types of visceral topography are constantly associated with certain types of frame-structure. It will be seen, too, that the stomach fits the body,—that it is not displaced, as is often supposed, but is a part of the individual body-structure. Any stomach that does not correspond to the body-form should, therefore, be looked on with suspicion.

In the routine Röntgen examination of the gastro-intestinal tract three varieties of stomachs are encountered: the normal, the reflex, and the pathologic. The signs of these must be learned. Distinction of the pathologic from the normal is not very difficult, but distinction of the pathologic from the reflex is often troublesome. The reflex manifestations, which are commonly of a spasmodic character, occur frequently in association with disease of the gall-bladder or appendix, and occasionally in neurasthenia, tabes, intoxications, renal calculus, and other conditions. They produce the most numerous and most deceptive counterfeits of pathologic signs; their careful exclusion is always essential.

The examination of the stomach has become one of the most important developments in *x*-ray work. Indeed, this fact is so evident that in all doubtful cases the patients should be sent for *x*-ray examination before they are dismissed. In this agent we have a means of distinguishing double lesions which is hardly possible by the older methods of examination; moreover, in this manner many lesions can be discovered earlier than by clinical findings alone.

From our own statistics we can say that nine-tenths of the ulcers of the stomach give distinct röntgenologic indications of gastric disease. Wider experience and more careful observations may yet demonstrate a greater degree of accuracy. The technic as used today is well developed, but it still admits of improvement.

*Presented before the Aberdeen Medical Society, Aberdeen, S. D., March 25, 1919.

As seen at operation four types of gastric ulcer may be distinguished:

1. Small, exceeding shallow mucous erosions.
2. Penetrating or callous ulcers, with relatively deep craters.
3. Perforating ulcers, with or without the production of an accessory cavity.
4. Carcinomatous ulcers, perforating and non-perforating.

Of these four types the small shallow ulcers offer the greatest difficulty to *x*-ray detection.

Fig. 1 (137135). Niche of gastric ulcer. Ulcer crater (niche) seen at *a*.

They are mere erosions, incapable of holding enough barium to make a visible projection from the gastric lumen. Unless accompanied by secondary Röntgen signs, such as the incisura or the incisura in combination with a six-hour retention, their presence is not likely to be suspected.

The penetrating ulcers which have burrowed more or less deeply into the gastric wall, produce a definite crater jutting out from the lumen of the stomach. The degree of facility with which this crater may be seen by the aid of the Röntgen-ray depends more on its location than on its size.

Perforation of an ulcer, with a continuation of the destructive process into adjacent tissues, results in the formation of an accessory cavity outside the stomach. Perforation may, of course, occur without any excavation of the tissues beyond the stomach.

Early carcinomatous ulcers are not distinguishable, as a rule, from non-malignant ulcers; their röntgenologic signs are the same as those of penetrating or of perforating ulcer.

The Röntgen signs of gastric ulcer may be described as follows:

1. The niche.
2. The accessory pocket.
3. The hour-glass stomach.
   a. Organic.
   b. Spasmodic.

The niche.—For convenience the application of this term is limited to the visualized crater of a

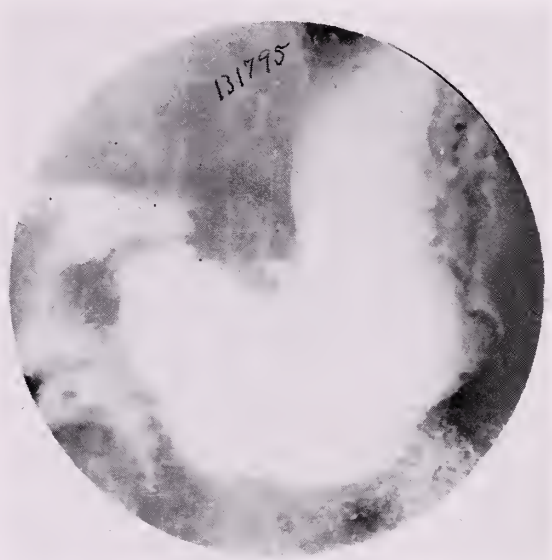

Fig. 2 (131795). Perforating gastric ulcer without accessory pocket formation. Ulcer crater seen at *a*.

penetrating ulcer, the cavity of which lies entirely in the wall of the stomach.

The niche shows as a bud-like prominence on the peripheral outline of the stomach. (Fig. 1.) Its size may vary from a mere fleck to 2 or 3 cm. in diameter. As an ulcer may occur in any part of the stomach, it follows that the niche may also be found anywhere. By far the larger number, however, are noted either on the lesser curvature, usually above the incisura angularis, or on the posterior wall near the lesser curvature. When they are situated on the vertical portion of the lesser curvature the barium-filled crater will usually show plainly in the anteroposterior view. If the ulcer is located on the posterior wall of the vertical portion of the stomach, it is often necessary to obtain an oblique view in order to dis-

cover it. Niches in the pyloric portion of the stomach are rare, and may be hard to distinguish; their visualization is hampered by the difficulty of obtaining any but an anteroposterior view. (Fig. 2.)

A small niche in any situation may be hidden or partially obliterated when the stomach is distended, so that careful observation should be made while the stomach is filling, especially while the patient is drinking the aqueous mixture. The niche accompanies the gastric wall in its movements, whether due to palpation or to respiration. It fills and empties directly with the stomach.

The accessory pocket.—As I have stated, the

Fig. 3 (121994). Accessory pocket, due to perforating gastric ulcer. Ulcer pocket seen at *a*.

accessory pocket occurs as the result of the perforation of an ulcer and extension of the ulcerative process into adjoining structures. If situated high the pockets are apt to perforate against or into the liver, while those lower and on the posterior wall are more likely to invade the pancreas. Instances of perforation between the layers of the lesser omentum, into the anterior abdominal wall, and into the spleen have also been noted.

When visualized by the barium meal the contents of the pocket are stratified like those of the stomach; the opaque barium at the bottom has a translucent layer of fluid above it, and this in turn is capped by a small gas bubble.

Accessory pockets range in diameter from 1 to 5 cm., or more. They are usually spherical in outline, but may be irregularly shaped. A pocket in the liver moves with respiration, while one in the pancreas does not. Barium remaining in the pocket after the stomach empties itself is one of the distinguishing features between a pocket and a niche. (Fig. 3.)

A six-hour rest in the stomach is often associated with perforating ulcers whether or not they form accessory pockets. Organic hour-glass stomach sometimes accompanies an accessory cavity.

The hour-glass stomach.—The third and last sign of gastric ulcer is the hour-glass stomach. The term hour-glass defines itself; it is applied

Fig. 4 (198494). Marked organic hour-glass stomach, due to small gastric ulcer. Crater of ulcer not visualized. The hour-glass constriction persisted after an antispasmodic to physiologic effect.

to every stomach with a locally constricted lumen anywhere between the pylorus and the cardia, whether this is due to organic change or to spasm, or to both. The time-honored classification of hour-glass stomach into congenital and acquired can hardly be discarded, even though the existence of the former is doubted by some. In a general way, acquired hour-glass stomachs may be grouped into two classes, organic and spasmodic.

Organic hour-glass stomach.—In the organic type the constriction is due to permanent structural changes either in or about the gastric wall. The stenosis thus produced is often increased by spasm of the circular muscle fibers, but regardless of this fact the condition is essentially organic

and stable. Generally the constriction occurs at the expense of the greater curvature, which is drawn sharply toward the lesser curvature, while the latter holds its usual position. The indentation of the greater curvature is, as a rule, relatively narrow, and results in a correspondingly short isthmus along the lesser curvature, which gives the deformed stomach a semblance to the capital letter B. This serves, generally, to distinguish it from the cancer hour-glass stomach, which usually is of an *x*-shape, with a rather long irregular canal, centrally placed. Röntgenologically it cannot be differentiated from the spastic

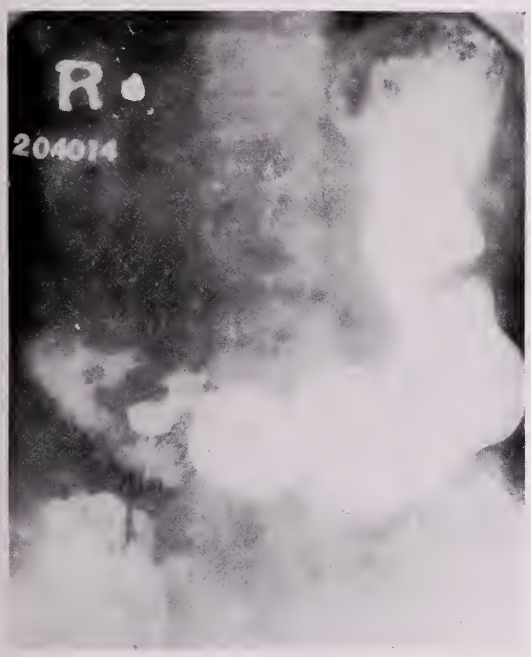

Fig. 5 (204014). Spasmodic hour-glass stomach in a case of gastric and duodenal ulcer. The crater of the gastric ulcer is not seen in the plate.

type of hour-glass stomach resulting from ulcer. (Fig. 4.)

All forms of organic hour-glass stomach have certain features in common: They are persistent at successive examinations; they are not relaxed by a general narcosis and are constant in situation; they cannot be effaced by epigastric massage; and they remain unaltered after the patient has been given atropin or belladonna to physiologic effect.

Spasmodic hour-glass stomach—the incisura.—These are of two types, the intrinsic and the extrinsic. The most common cause of the intrinsic is gastric ulcer. The extrinsic is due to reflex spasm arising from sources outside the stomach and may exactly simulate the hour-glass of ulcer. For this reason it is necessary to differentiate these two types. This is done by giving the patient tincture of belladonna, beginning with twenty drops and increasing the dose sufficiently to produce the usual physiologic effects, such as dryness of the throat, pupillary dilatation, flushing of the skin, etc. The patient is then re-rayed. If the hour-glass persists a lesion of the stomach is present. If the hour-glass is not found on the second examination the cause is outside the stomach. It is true that belladonna and atropin will not differentiate intrinsic spasmodic and organic forms of hour-glass stomachs, but they will differentiate the intrinsic and extrinsic forms. When the hour-glass contraction is the only sign present, this test must be very carefully carried out, for,

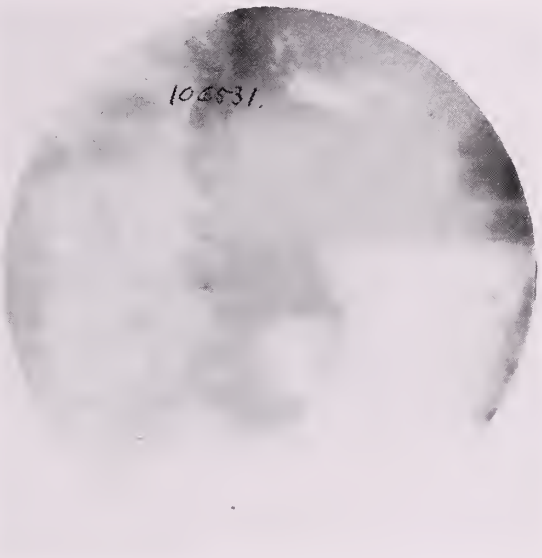

Fig. 6 (106531). Large gastric ulcer at *a*. Microscopic examination showed malignancy.

otherwise, the röntgenologist may lead the surgeon into error. It has been our experience that any hour-glass constriction that resists belladonna to the physiologic effect means a lesion either of the stomach or duodenum; and, regardless of whether or not the hour-glass is present at operation, the surgeon will find the cause, if he looks for it. Spasmodic cases of hour-glass stomach, whether intrinsic or extrinsic in cause, are not seen at operation because they are relaxed by the narcosis. (Fig. 5.)

The common features of extrinsic hour-glass stomach are as follows: It may change in appearance during the examination; it is relaxed by a general narcosis; it may sometimes be erased by steady, forceful, though not violent, epigastric massage; it is often absent at a second examina-

tion; and it disappears after the giving of an anti-spasmodic to physiologic effect.

Residue.—A distinct residue in the stomach from the six-hour meal, amounting to a quarter or more of the quantity taken, is a relatively common accompaniment of the various types of gastric ulcer. In a series of 215 consecutive cases, we noted a retention in 118 (55 per cent). Thus gastric ulcer stands a close second to gastric cancer in this respect. While a retention from the six-hour meal as used in the Mayo Clinic usually designates a pathologic condition either in the stomach or duodenum, it is looked on only as a contributory sign. Taken alone it would not support a diagnostic opinion.

Carcinomatous ulcer.—The röntgenologic signs of ulcer differ so much from those of carcinoma in the larger number of cases that differentiation requires no effort. For example, a callous ulcer with a niche, or a perforating ulcer with the formation of a pocket has no röntgenologic resemblance to a well-developed carcinoma. In a general way, ulcers always project from the gastric contour, while in carcinoma the growth with its resultant irregularity extends into the gastric lumen. Between the typical ulcer and the typical carcinoma this is a small percentage of cases in which the röntgenologic differentiation is impossible. These are the borderline cases, in which carcinoma cells are found in the ulcer. In such instances the *x*-ray signs are chiefly those of ulcer, and a diagnosis of ulcer is likely to be made.

Experience has impressed me with the fact that the extreme size of an ulcer-crater, as shown by a very large niche, should make one suspicious of malignancy. A niche 3 cm. or more in diameter is apt to show microscopic signs of carcinoma. (Fig. 6.)

The differentiation of pyloric ulcer from pyloric cancer is sometimes very difficult. If one keeps in mind, however, that 90 per cent of all gastric ulcers occur in the vertical portion of the stomach and that about 70 per cent of the cancers of the stomach occur in the pyloric portion, the differentiation is not so difficult as it might at first seem. In either event, the only röntgenologic signs may be a six-hour rest and an atypical irregularity of contour. The röntgenologist can only say with certainty that a lesion exists. A correlation of his findings with the clinical data may justify an opinion that one or the other condition is present.

The diagnosis of gastric ulcer is then most important because of the fact that an ulcer sometimes shows carcinoma cells, and its diagnosis, in many instances, is equivalent to an early diagnosis of cancer.

Whether the malignant ulcers of the stomach start as malignant ulcers or change from benign ulcer to cancer, no one knows. Consequently the medical treatment of gastric ulcer on the one hand and procrastination against surgery by physician and patient on the other, may occasionally deprive the patient of the only chance for cure.

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POVERTY AND ITS CAUSES

In the city of Baltimore, says Arthur E. Hungerford in *Leslie's Magazine,* through means of a municipal appropriation, some amazing facts have been brought to light as to the apparent causes of poverty and misery, and many of our pet theories will be demolished when the report is carefully studied.

It has been found that disease, sickness, and other physical handicaps were the first cause of poverty in 47 per cent of the cases studied. Some moral handicap, or wickedness (whichever you choose to call it), has a record of 25.18 per cent. The two together make up nearly three-quarters of the entire number of families considered. Economic handicaps, such as old age and large families, play a rather small part in the troubles of those studied. Approximately 60 per cent of those needing help were comparatively young,—that is, between the ages of eighteen and forty years. Drunkenness and heavy drinking play a much smaller part than has been heretofore considered. The report from Baltimore shows that in only 149 cases were these the first cause of poverty. But few large families sink below the poverty line. Of the 8,663 families studied, the average number of members was three.

This undertaking was carried out by the plans, experience, and science of the efficiency engineer, accountant, business man, college professor, and the trained social worker; and the experiences of the indigent themselves were called into play in this effort to get at the things which caused men and women and families to lose their independence. It is the most elaborate and comprehensive study of its kind made in the United States, and is believed to cover the largest number of cases. It is probably the first time that a municipal appropriation has been granted for such a purpose.

It was shown that small families were more conducive to poverty than large ones. The investigators had information as to the number of children, and found there were none under sixteen years of age in nearly one-half of the recorded cases of poverty. It is possible, however, that, where the families are small, the children have left home early,—either going to work or drifting away for other reasons.

The death-rate of babies and children in these families, according to the report, is below the average for the entire population. For instance, of the 8,419 families studied, it shows that 7,539 have never lost a child, and that in 565 cases there was only one dead child,—that is to say, in less than 4 per cent were there two dead children.

Old age, another generally accepted first cause of poverty, is bowled over by the figures presented. The report says, in its summing up, that the figures compiled seem to indicate that in Baltimore among the classes dealt with the immediate cause for assistance was more or less special to the individual or family concerned, such as low physical, moral, or mental competency,—either congenital or the result of some accident or misfortune. It does not show what part, if any, is played by economic conditions affecting large portions of the community.

Bad as the conditions were, they were not such as would economically submerge any considerable number of persons who were not physically, morally, or mentally ill. It is quite possible that the low standard of wages in particular industries may itself have been the cause of living conditions which would bring about physical, if not other, infirmities, but the data obtained do not justify the assertion that such was the case.

THE PERCENTAGE OF VENEREAL DISEASE AMONG DRAFTED MEN

The United States Public Health Service has just issued a circular commenting upon the percentage of venereal disease among approximately the second million drafted men, by states, and it furnishes some very interesting data.

The examinations at demobilization camps showed that 5.4 per cent of the men had venereal

disease at the time of their arrival in camp. This percentage includes only obvious cases of syphilis, gonorrhea, and chancroid (Wassermann examinations were not given), nor do these statistics include those who had been cured prior to the date of examination or who may have become infected later.

The record given for most of the cities of the United States having a population of 30,000 and over, according to the 1917 estimate of the Bureau of Census, is rather interesting.

Cities of 30,000 to 40,000 population, for instance, show that at Jamestown, N. Y., the percentage is 0.8; Pittsfield, Mass., 1.56; Madison, Wis., 2.33; San Jose, Calif., 3.20; and Cedar Rapids, Ia., 3.67. From here on the percentage increases in cities like Elmira, N. Y.; Aurora, Ill.; Newark, Ohio; Austin, Tex.; Battle Creek, Mich.; Danville, Ill. (where it reaches 10.09); Wilmington, N. C., 14.56; and Columbia, S. C. 14.98.

Of cities between 40,000 and 50,000, Racine, Wis., has the smallest percentage, namely, 1.15. Pasadena, Calif., has a percentage of 1.99; Superior, Wis., 2.82; Topeka, Kans., 2.96; Butte, Mont., 5.70; Davenport, Ia., 6.28; Charlotte, N. C., 11.03; Galveston, Tex., 14.79; Portsmouth, Va., 15.32; and Macon, Ga., 18.43.

Among the cities having a population of 50,000 to 100,000, Bayonne, N. J., has .82 per cent; Portland, Me., 2.64; Hoboken, N. J., 3.22; Rockford, Ill., 4.08; Duluth, Minn., 4.37; Pueblo, Colo., 4.60; Wichita, Kans., 4.95; Sioux City, Ia., 5.46; Terre Haute, Ind., 6.68; Knoxville, Tenn., 9.33; Atlantic City, N. J., 10.04; Oklahoma City, Okla., 11.22; Little Rock, Ark., 15.56; Charlestown, S. C., 17.45; Tampa, Fla., 19.29; Savannah, Ga., 27.45.

Of cities with a population of 100,000 to 500,000, Cambridge, Mass., leads with 2.03; Milwaukee, Wis., has 2.55; Spokane, Wash., 3.60; Seattle, Wash., 3.83; St. Paul, Minn., 3.98; Minneapolis, Minn., 4.09; Louisville, Ky., 5.30; Nashville, Tenn., 9.67; Dallas, Tex., 14.30; Fort Worth, Tex., 18.67.

Out of this schedule of cities of 100,000 to 500,000 population, there are fifty-seven cities mentioned; and we have simply abstracted a few to show the gradual increase as we go down the list. In cities of 500,000 population and over, New York City has the smallest, 2.44. Los Angeles has 3.17; Chicago, Ill., 5.71; Baltimore, Md., 7.28; St. Louis, Mo., 8.58.

In Newark, N. J., for instance, out of every hundred draftees who arrived from the various mobilization camps, four, on the average, had a venereal disease. On a ten thousand basis, there would be 423 men with venereal disease.

The venereal diseases here reported, in this outline, constitute the greatest cause of disability in the army, and for this the Surgeon General of the War Department concludes that civilian communities have been responsible, and that virtually all of the cases of venereal disease were contracted in communities over which civil authorities have control. It will be noted that the percentage is much higher for the country as a whole than the percentage for the first million men drafted. This is due to the fact that, as a result of the experience gained by examining medical boards, more careful examinations were made in the second million than in the first million. The army has done more than its part in combating venereal disease. Civil communities must continue the fight with vigor. It will be noted, too, that the highest percentage, among cities of all populations quoted, has been greater in the South, and the assumption is that it occurs more among the colored race than among the white, although no statistics have been evolved to define this with exactitude.

Whatever the statistics show, it is a warning to each community. The number of cases of venereal disease may be diminished if the communities which have control of the venereal situation, through state boards of health, should show a lesser number in the years to come—perhaps.

PROHIBITION AND TANGLE-FOOT

The wave of prohibition which has engulfed most of the United States is causing a great deal of comment, with some variation in opinions, as to its value. Some years ago the Minnesota State Medical Association passed a resolution which, in effect, said the State Association believed that the use of alcohol, either by prescription or advice, would not meet with the approval of the organization; and the physicians in general throughout the state have adhered to this position.

The great and lasting benefit which the wave of prohibition means to the country is the abolishment of the saloons and drinking places, which attracted the feeble and unwary, those who are unstable and defective; and in this the greatest success of the prohibition movement is to be acknowledged. But it is rather amusing, or perhaps one might say pathetic, to hear the various

arguments directed against prohibition. One of the first is that it attacks one's personal liberty, and prevents each man from doing as he pleases; and some of our socialistic and "wet" orators are very loud in their condemnation of anything with a prohibition taint. These men are, of course, talking to political adherents. Some of them really believe that their personal liberty is assailed; and they resent, with great indignation, the fact that they are unable to have a glass of beer or a glass of wine whenever or wherever wanted.

These men, naturally, have a great many followers, and it is well known that all of them who want anything to drink contrive in some way to get it in any dry territory. The writer cannot conceive of a place that is absolutely "bone dry," but all places will become practically dry because of the restrictions thrown about the transportation of liquor.

Through this movement the resources of the country have been augmented, as shown by the deposits in banks, the more prompt payment of bills, and a gradually lessening degree of crime and drunkenness.

The tangle-foot side of the problem represents those men who are opposed to a general reform. The men who are adherents of the dry proposition, particularly in Congress (and doubtless in many state legislatures), have gotten into all sorts of "messes" following a general mental entanglement on their part,—not due, of course, to the use of liquor, but to the lack of use of brains.

When a reform party starts out with a big problem like prohibition in a place like the United States, or any other large country, they expect opposition; but in their enthusiasm, and in their desire to promulgate personal reforms, they go to such extremes that their attitude becomes more than radical. They go so far, sometimes, as to make the whole proposition ridiculous, and it is well known that any extremely radical measure does not remain in force for any length of time. This has been demonstrated in the so-called prohibition states, and in some of the so-called "bone dry" states. Somehow, the transportation of liquor or its manufacture cannot be wholly prevented; in one state which has been dry for four or five years, there are many "oases," where the really, truly thirsty moneyed man can get what he wants.

An incident has been recorded in the daily press in which a farmer in western Minnesota is reported to have had six thousand dollars' worth of liquor stored in his home. A thirsty crowd decided to retrieve a little of this stock in storage, and they apparently got away with a good portion of it. The dry men admit that for a time it will be difficult to control such accumulations of drinkable material, but they maintain that in time, and that not far distant, there will be no liquor for sale or transportation.

It is rumored, perhaps unfoundedly, that there are hundreds of thousands of private stills all over the country, and the larger portion of these are found on farms, where grain is abundant and where a simple process of distillation is easy. If the Government would inaugurate a system of education showing that this new, raw fusel oil is extremely poisonous, perhaps there would be a lesser number of stills in operation.

Of course, the average family is not able to make beer, because that requires the services of a highly paid chemist, for it seems to be pretty well admitted that beer is a chemical product, and that the malt from which beer was formerly made is a comparatively small factor in its manufacture. But when the housewife who makes a little elderberry, logan-berry, or rhubarb wine with which to tickle the palate of herself and family, realizes that the Government may make it embarrasing for her, or the extremists may prevent the manufacture of these delicate wines for household use, it is going to create opposition to the Government plans.

There is a growing suspicion that the so-called "wet" men are egging the "dry" men on to carry the legislation against the use of liquor to the greatest possible extreme, in order to make it a laughable and ludicrous problem.

The number of men and women who have stored up liquor for future use is probably incalculable; some of them have exceeded the expenditure of the Minnesota farmer, and have stocked up with thousands and thousands of dollars' worth of drinkable material.

One rumor, credited to a large city in the Middle West, was that a wealthy man had bought five hundred thousand dollars' worth of liquor and had it stored away in his wine cellar. It would probably be more in keeping with the enormous sale to say that it was stored in a newly constructed basement. However, it seems incredible that anyone would put such an amount of money into "inflammable" material.

Then, too, the "drys" resent the suggestion of the "wets" that, when prohibition is really in force, drugs will come to the foreground, or, at least, some potable chemical compound will be

manufactured to take its place. This sounds quite reasonable, because the great and good people of the country will stand for reform until they have a revolution of feeling, when, after being good, they want to be just a trifle bad.

Dr. Pierce Clark, of New York, read a paper before the American Neurological Association at Atlantic City, in June, in which he discussed the alcoholic problem, and suggested that it was a good thing to abolish the saloons, but he thought it would be a wise thing to keep the bartenders because they would make such excellent inspectors. If one could imagine the number needed by the Department of Justice, one would stop to calculate how it would be possible to maintain an army of inspectors, for invasion purposes, all over the country, particularly when the private still becomes almost as important a household utensil as is the wash-boiler.

The readers of THE JOURNAL-LANCET are urged to take this editorial at its real value, and to remember that THE JOURNAL-LANCET is just as eager to prevent the annihilation of people by the use and misuse of liquor as are the prohibitionists, and is always ready to give its hearty support to the new movement, provided it is properly carried out.

SOME GRIEVOUS FAULTS OF PHYSICIANS THAT HURT THE PROFESSION

The honeyed word is almost universally accepted at its face value and pronounced sweet. Too often repeated it may become nauseating, but nausea can generally be cured by more honey, on the "similia" principle of our little pill friends, a principle in which every honey-bee believes.

We cite the above and accepted experience of life to prove that we know that what we are about to say, as suggested by our text, will not be received with applause, and that we sin in light, not in darkness.

Our readers know that physicians will accept, or even sometimes seek, places on the program of a medical or other meeting without the least intention of appearing at such meeting to deliver the promised paper or to take part in the discussion; and not infrequently they will do this without sending a letter or telephoning to the secretary or the president of the society that they will not attend the meeting. Sometimes such a failure disappoints men who have made real sacrifices to attend the meeting, not simply to hear the promised paper, but to perform their duty to the society or, it may be, to the profession and the public.

Physicians will also accept places on committees with simple and easily performed duties, and yet they will neglect the duties imposed by their acceptance, and do so without the slightest idea that they are doing wrong to anybody. For instance, a state medical society at its annual meeting appoints a committee on necrology whose duty is to give, at the next annual meeting, a report of the deaths in the society during the year. Failure to make a permanent record of this character is so unkind to the relatives and friends of the deceased members, as well as to the society, that we hesitate to characterize it.

Some men will also accept the honor—always a real honor—of delivering the so-called "oration," that is, the principal address before a society meeting, and then fail to furnish the copy of the address for the transactions or official paper of the society, thus giving it to the absent members of the society which has honored the speaker by its invitation. Some go even a step beyond this. They will take part in a symposium with the full knowledge, given by proper notice, that the papers and discussion become (as generally expressed) the property of the society and are to be published; and then they will fail to live up to the agreement, even though later notified that the symposium cannot well be published in the absence of such paper or discussion.

Now, we find ourselves getting into possible trouble, for every reader who is hit by these generalities will say we are aiming at him—are saying mean things about him, while we have no man in mind as we state these unpleasant facts about our profession, for these facts have come to us in an experience of many years' dealing with the transactions of medical societies.

May we not hope that no member of the profession will be guilty of these things that hurt after his attention has been called to them in the sincere way we have attempted to point some of them out to him. We are sure every medical editor in the country will second our efforts to obtain a reform so obviously needed.

MISCELLANY

RESOLUTIONS OF RESPECT FOR DR. HUGH F. McGAUGHEY, WINONA

At a special meeting of Winona County Medical Society, held June 23, 1919, the following resolutions were passed regarding the death of Dr. Hugh F. McGaughey:

"The members of Winona County Medical Society record with sincere regret the untimely death of Dr. Hugh F. McGaughey.

"As a student and practitioner he had proved himself of an unusually high order of ability.

"Sound in judgment, a clear thinker, an ever-ready friend in distress, he endeared himself to all those who had learned to rely on his professional services.

"In his death we have lost a valuable friend and fellow practitioner.

"Recognizing his worth and as an evidence of our appreciation of his worth, we, the members of Winona County Medical Society, do hereby resolve that the foregoing brief memorial of the connection of Dr. Hugh F. McGaughey with this society be entered in the permanent records of the society, and that a copy be delivered to the family of the deceased.

"WINONA COUNTY MEDICAL SOCIETY.
By E. D. KEYES,
"Secretary Pro-tem."

PUBLIC SERVICE—THE PHYSICIAN'S DUTY

The professional man generally, and the physician in particular, has come to be looked upon as a public character, owing a direct and peculiar service and duty to the public. He is one of a class of citizens who by education and experience has acquired a bigger, broader point of view than can be attained by the average citizen. His education and training give him an understanding of the interests of groups of people. The average man is accustomed to look to the physician for advice and direction in the extraordinary things of life, the things that are beyond the capabilities and experience of the average individual.

The community today looks to the physician for public service as a part of his job. His standing and influence in the community force the community to look to him for this service. The medical profession has been brought forth from the laboratory and the office and placed in the limelight of public service. We have doctor-mayors, doctor-aldermen, doctor-governors, doctor-congressmen and doctor-senators. The public life which half a century ago was confined almost exclusively to the legal profession now demands the services of all men with the broad point of view which is conferred by a professional education.

In assuming the responsibilities of public service, the physician is not only performing his duty to the community: he is contributing directly to his own personal and professional success. The physician who becomes favorably known to his community through his public service, will soon become favorably known for his professional service. By no other means conforming with the ethics of his profession can the physician acquire so wide and so thorough acquaintance with the men and women upon whom his professional success depends as he can by public service.

The physicians of the country have demonstrated their willingness to accept the responsibility of public service during the war period. The self-sacrificing services of the profession as a whole in connection with the formation of the great national army through the draft, not to speak of the actual field service of the thousands of physicians who served abroad or in the training camps here, demonstrated the public spirit of the profession.

A great opportunity is now before the physician in his character of a public man. The American people are seeking to perpetuate the habit of thrift acquired under the stress and strain of the war period. The success of this movement means a strong, self-reliant American people, independent and able to care for themselves. It means people prepared for the rainy day of adversity or prepared to take advantage of the opportunity which is constantly recurring in American life. It means a better level of moral and financial prosperity in every community.

Every physician should at once join the thrift movement. It is organized by the federal government through the twelve Federal Reserve Districts, and is represented in every community by a Savings Director, whose duties are to educate his community as to the advantages and opportunities of thrift and to forward the sale of Thrift Stamps and War Savings Stamps which the government has made available for reducing the thrift campaign to concrete accomplishment.

DR. JACOBI'S CAREER

Very few men in the medical profession of America have stood higher than Dr. Abraham Jacobi, of New York City; therefore we believe the following tribute to him from a lay newspaper (*The Boston Transcript*) will be read with pleasure by all physicians.—THE EDITOR.

Dr. Abraham Jacobi, one of the foremost physicians in the United States, died at his summer home on Lake George. He was 89 years old. A revolutionist and political prisoner in Germany in 1848, he followed his exiled friend, Carl Schurz, to America in 1853, and set up a practice in medicine in the tenement district of New York city, which he continued for the remainder of his long life, becoming widely recognized as a famous pioneer in pediatrics, or the treatment of babies' and children's diseases. Among the tenement dwellers of New York he tried particularly to keep the children of the gutter healthy.

Dr. Jacobi was born at Hartum, Westphalia, Germany, in 1830, and began his medical studies at the age of 17. He attended the gymnasium at Minden, and the universities of Griefswald, Gottingen and Bonn. As a physician, he joined the revolution of 1848, and like many other students, was thrown into prison.

American and foreign medical societies and universities honored Dr. Jacobi. The University of Berlin offered him the professorship of pediatrics, but he declined. He held similar professorships in the New York Medical college and the College of Physicians and Surgeons from 1870 to 1902, when he was made professor emeritus. He had held many other important

hospital appointments. New York University, Harvard, Yale, Columbia and Michigan universities conferred degrees upon him, and among his colleagues he was highly respected for his efforts to rid the profession of charlatans.

Dr. Jacobi was a member for 60 years of the New York Academy of Medicine, serving for a time as its president. For more than a half century he was officially connected with Mount Sinai hospital in New York. At the age of 82 he served as president of the American Medical Association. He was a member of many medical societies. He had written several volumes upon medical subjects.

NEWS ITEMS

Dr. Andrew Gullickson, of Bricelyn, is home from army service.

Dr. O. F. Benson has moved from Glen Ullin, N. D., to Seattle, Wash.

Dr. Walter E. White, of Winsted, Minn., has moved to Ipswich, S. D.

Dr. F. A. Gowdy has moved from Sidney, Mont., to Alexandria, Minn.

Dr. I. G. Metrout, who recently returned from France, has located at Fertile.

Dr. J. H. Vallancey, of Fessenden, N. D., has moved to Ravenswood, Chicago.

Dr. J. T. Nordin, of Minneapolis, is home from France, and will resume practice.

Dr. Alvin Lee, of Howard Lake, has returned from army service, and resumed practice.

Dr. George Edwards, of Bruce, S. D., is home from twenty-two months of medical service.

Dr. W. J. Stode, of Hastings, has returned from France, where he spent fifteen months.

Dr. A. P. Norris, of Cambridge, Mass., has located in Meadowlands, Cook Co., Minnesota.

Dr. C. E. Goodman, of Virginia, was married last month to Miss Esther Gomberg, also of Virginia.

Dr. C. H. Payette, of West Duluth, was married last month to Miss Mary Pepin, of Billings, Mont.

Dr. J. P. Miller, of the firm of Drs. Larrabee & Miller, of Mandan, N. D., has moved to Grand Forks.

Dr. George Edwards, of Bruce, S. D., is home after an absence of nearly two years in army service.

Dr. J. F. Hanna, of Fargo, N. D., has been discharged from service, and will resume practice at once.

Dr. D. C. Darrow, of Fargo, N. D., has been in Chicago doing postgraduate work in skin diseases.

Dr. W. A. Bates, formerly of Northville, S. D., is home from army service, and has located in Aberdeen, S. D.

Dr. H. D. Newby, of Parker, S. D., has gone to New York for a three months' course of postgraduate work.

Dr. Harry Kline, a recent graduate, has become associated with his father in sanitarium work in Anoka.

Dr. H. H. Holm, a graduate of the University of Minnesota, has become associated with Dr. Freed, of Cokato.

Dr. W. F. Maertz has resumed practice in New Prague after a year and a half army service in this country and France.

Dr. H. D. Diesner has moved from Chaska to Waconia, where he will be associated with his father, Dr. H. R. Diesner.

Dr. W. C. Aylen, of Mandan, N. D., has received his discharge from Ft. Snelling, and has resumed practice in Mandan.

Dr. H. L. Crane, of Lead, S. D., is home from France. Dr. Crane volunteered early in the war, and was sent to France at once.

Dr. J. G. Lamont, of Dunseith, N. D., has been re-appointed medical director of the State Tuberculosis Sanitarium at Dunseith.

Dr. John S. Macnie, of Minneapolis, recently returned from army service, and has resumed the practice of ophthalmology and otolaryngology.

Dr. George V. Jamieson, of Devils Lake, N. D., is home from France, but will not resume practice in Devils Lake. He will locate in South Dakota.

The Sioux Valley Eye and Ear Academy met at Omaha, Neb., on July 22. Papers were presented by men from Minnesota, South Dakota, Iowa, and Nebraska.

The Minnesota State Board of Health says that there were 137,933 cases of influenza reported to the Board from Sept. 1, 1917, to April 30, 1918, with 9,842 deaths.

Dr. E. W. Jones, of Mitchell, S. D., was one of the first medical men of that state to enter the war, and he is now back after twenty-three months of active service.

Dr. G. H. Conklin, of Superior, Wis., who was

a major in the Medical Corps and on duty in France in charge of a convalescent hospital, has resumed his practice in Superior.

Dr. J. C. Fogarty, of Viroqua, Wis., has moved to Hastings, Minn., and become associated with P. H. Cromer, of that place. Dr. Fogarty is a graduate of Rush, class of '12.

The Medical Department of the University of North Dakota is conducting a summer school, with a class in home nursing under the direction of Dr. James Grassick, of Grand Forks.

It is reported that an institute of dental specialists is to be founded at Rochester. The names of Rochester and Fargo (N. D.) dentists are mentioned as founders of the group.

The Red River Valley Medical Society held a quarterly meeting at Thief River Falls last month. Dr. Milan, of the Tri-County Sanatorium, gave the principal paper, which was fully discussed.

Dr. Kenneth Taylor, of St. Paul, has returned from France, where he did splendid work, receiving decorations from the American and French governments for his serum treatment of poison gas.

Dr. H. A. Bouman, of Minneapolis, and Dr. Arthur Sweeney, of St. Paul, presented papers at the mid-summer meeting of the Sioux Valley Medical Association, held in Sioux Falls, S. D., on July 16.

Dr. Alexis L. Pratt, of the Pension Bureau, Washington, D. C., died in Mankato last month at the age of 68. Dr. Pratt was a Minnesota man, but went to Washington to do government work in 1872.

Contracts have been let for the building for the New Madison Hospital of Madison, S. D. The cost of the building will be $75,000. Drs. R. S. Westaby and D. S. Baughman were the principal promotors of the enterprise.

Dr. Julius J. Heimark, of Clarkfield, was married last month to Miss Esther J. Moe, of Minneapolis. Both bride and groom are graduates of the University of Minnesota, and many classmates of each were at the wedding.

Dr. Raymond Shannon, a recent graduate of the Medical School of the University of Minnesota, was married last month to Miss Mary Catherine Westaby, of Portland, Ore. Dr. Shannon will begin practice in Minneapolis in October.

Dr. Alexander J. McRae, of Mt. Vernon, N. Y., is the new superintendent of St. Luke's Hospital of Duluth. Dr. McRae has had extensive hospital experience in the East, and did administrative work while in the Medical Corps.

Dr. Edwin S. Muir, of Winona, died on July 14 at the age of 48. Dr. Muir was a graduate of the University of Minnesota, class of '94, and has been twice mayor of Winona. His death was due to overwork during the influenza epidemic of last winter.

The summer course in public health nursing at the University of Minnesota was abandoned because of the small number of registrants. A four-months' course will open on Sept. 1. Detailed information may be obtained from Miss Vannier at the University Hospital.

Dr. A. S. Hamilton, who was assigned to Mineola as neurologist to the Aviation Service in July, 1918, and later neurologist to the Surgical Service of the Walter Reed General Hospital, at Washington, has returned to Minneapolis to resume his practice. He was made a major while in service.

Dr. J. R. Pence, of Minot, N. D., has recently returned from France and is again associated with his brother, Dr. R. W. Pence. For the past ten months Dr. Pence had charge of the *x*-ray department of Base Hospital No. 82 at Toul, France. Since returning he has purchased and installed an up-to-date *x*-ray outfit.

Dr. Goldie Zimmerman, of Sioux Falls, S. D., recently returned from France, where she worked among the refugee children of northern France and Belgium, has been awarded a scholarship by the University of Minnesota for two years. She will devote the time to research work at the University Hospital in children's diseases.

The Range Medical Society met at Biwabik last month, when the following officers were elected: President, Dr. C. B. Lenont, Virginia; vice-president, Dr. C. W. Bray, Biwabik; secretary, Dr. W. M. Empie, Virginia. The Society is making a thorough investigation of the tuberculosis situation on the Range, and how to meet it with sanatoria.

Dr. W. J. Mayo recently made a statement before the bars (legal) of Wisconsin and Minnesota in joint session, that the pure water available in all American cities and villages made prohibition possible in this country, while it is wellnigh impossible abroad where pure drinking water is often unobtainable. The statement has attracted wide attention in the press.

The Northwestern Hospital, of Brainerd, has

been incorporated in the name of the Northwestern Medical & Surgical Association, with a capital stock of $50,000. It was founded in 1908 by Dr. Joseph Nicholson, and its work has been mostly surgical. Dr. Nicholson is still a member of the board of directors, and it is his intention to make the hospital a general hospital.

The Northern Division of the Red Cross is looking for a physician who is willing to travel for it to establish first-aid classes, give instruction in first-aid service and accident-prevention, and to organize first-aid work. A salary of about $2,000 with expenses will be paid. Information may be obtained from Dr. Henry Wireman Cook, Medical Advisor of the Division, Minneapolis.

An American hospital to cost $10,000,000 will be erected in London to commemorate the cooperation of the medical men of the United States and Great Britain in the World War. Drs. Ochsner and Martin, of Chicago; Dr. Crile, of Cleveland; Dr. Matas, of New Orleans; and the Drs. W. J. and C. H. Mayo, of Rochester, were members of the American committee formulating preliminary plans.

LABORATORY TECHNICIAN WANTED

A private hospital in North Dakota wants a young woman for laboratory work. Experience and references required. Address 256, care of this office.

LOCUM TENENS WANTED

General man to relieve member of firm for the months of August and September in Minnesota town of 3,000. Salary, $200 per month. Address 267, care of this office.

PHYSICIAN WANTED AT ONCE

A good doctor is wanted to locate in a small Minnesota town, with the nearest doctor 20 miles away. Large surrounding territory. This is a splendid opening for a young man. Address Andrew W. Clay, Grygla, Minn.

APPARATUS FOR SALE CHEAP

On account of the death of Dr. Beil, I offer for sale at low price, the following: Static machine, galvanic, faradic, high frequency batteries and new *x*-ray tube and electric instruments—all in fine condition. Please make an offer. Mrs. A. Beil, Selby, S. D.

PRACTICE WANTED: PARTNERSHIP OR OTHERWISE

A graduate of an A+ school, with an experience of five years in general practice and two years in the army (1 year abroad with rank of major) wants to locate in a city of 3,000 to 5,000 or larger. The best of references, professional and business, will be furnished. Can speak German well. Will accept partnership or purchase practice. Address 259, care of this office.

POSITION AS LABORATORY TECHNICIAN WANTED

By a young woman, in a hospital or with a group of doctors, preferably in the Twin Cities. Routine laboratory work; experienced in tissue work; have assisted in making Wassermans; best of references. Address 254, care of this office.

PRACTICE FOR SALE

Practice free to purchaser of modern office equipment; ground floor office, basement and furnace; southern Minnesota, no competition, large territory, fees the best, good roads; town 400, rich country. All conveniences, good drug store. Practice, $6,000 and upward, 98 per cent collectible. Address 266, care of this office.

MANAGEMENT OF SANITARIUM OR HOTEL WANTED

If you need a good man who is able to handle all the business, write me. Twelve years' experience. Open for position after October 1st. Good salary will be asked. Would be interested in opening new location with investment. Address 263, care of this office.

YOUNG PHYSICIAN WANTED

A long-established physician in a village of 1,000 population in Southern Minnesota wants a young man to assist him. Will pay a fair salary for first few months, followed by an equitable part of the income, with still better prospects if person is satisfactory. Address 258, care of this office.

PRACTICE FOR SALE

I am obliged to sacrifice my practice on account of ill health. It is a $10,000 general country practice in Southern Minnesota. The village has 1,000 people, and the country round it is very rich. It does not require much cash for the right man to buy it, and there will be no misrepresentations about it. Address 261, care of this office.

SURGICAL PRACTICE FOR SALE

A physician and surgeon who has a good practice in a North Dakota town wishes to secure a good man to take his practice, which has consisted mostly of surgery, but also some country work. Books show collections of over $9,000 cash last year. Am changing location for a better opportunity to practice surgery, but wish to leave a good man in my place. Would like to dispose of some things, but not at an unreasonable price. I will gladly furnish any further information requested. Address 265, care of this office.

DOCTOR WANTED

Splendid opportunity offered to up-to-date physician and surgeon with $2,000 to $10,000. Community will invest balance of $20,000 to take over local hospital and equipment. Association incorporated under Minnesota state laws. Practice of former physician averaged $500 cash monthly for five years. No physician here at present time. A very rich farming community and a well known summer resort. Neighboring physicians will support hospital. Applicants must give references. Address Community Hospital Association, South Haven, Minn.

PUBLISHER'S DEPARTMENT

MINNEAPOLIS CLINICAL LABORATORY

Few laboratories in the country are doing a higher grade of work than the Minneapolis Clinical Laboratory, which is the oldest public laboratory in the Northwest. Its director from its foundation is Dr. Henry L. Ulrich, whose specialty is internal medicine, and whose original investigations in autovaccines are well known to our readers.

This laboratory does all the routine work usual in laboratories, and much besides, particularly the preparation of autovaccines.

THE McINTOSH BATTERY & OPTICAL CO.

It is a pleasure to believe, with one's belief well founded, that among the manufacturers of mechanical appliances for the use of physicians, especially electrical devices, there are few wholly unreliable firms. On the whole, such work is done well, and yet there is room for choice among these manufacturers. Some men have great pride in making a record for efficiency in all that they do, and that pride extends to the minutest detail of their work. The result, of course, is a well-nigh perfect product.

Such a course has been followed by the McIntosh Battery & Optical Co., of Chicago, for *forty* years.

KENILWORTH SANITARIUM

Our intricate modern life is producing problems so intricate that their solution taxes our best modern genuis; and no such problem is greater than the care and cure of the nervous and mental results of this life. The neurologist and the psychiatrist, who have studied these problems intensively, all agree that only institutional treatment gives results at all satisfactory.

But the problem is not solved until the well-nigh perfect institution is found. At least one such institution is the Kenilworth Sanitarium, of Kenilworth (a Chicago suburb), Illinois, with a distinguished staff, composed of Drs. Sanger and Sherman Brown and Dr. Florence Kramer. Kenilworth is, indeed, a great institution.

THE MINNESOTA SANITARIUM

For nervous and mild mental cases there is no better institution than the home-like sanitarium that accommodates only ten or a dozen patients; and a fine old home residence building is often ideal for such an institution.

The Minnesota Sanitarium of Minneapolis is just such an institution. It is located at 1926 Fifth Avenue South, and is under the medical management of Drs. Leo M. Crafts and Julius Johnson, who give every patient the most careful medical attention; and the superintendent, Mrs. Sophie E. Dybvig, neglects nothing that contributes to the comfort of the patients.

Both Drs. Crafts and Johnson are men of high standing in the profession; and their sanitarium is of equally high standing.

IODOTHOL—AN IDEAL IODINE PREPARATION

The statement that "Iodothol" is an *ideal* iodine preparation for use as a surgical dressing for mangled and lacerated wounds and as a nasal spray and mouth-wash, is made by the Western Chemical Company, the manufacturers of Iodothol, of Hutchinson, Minnesota, a comparatively new firm, perhaps not known to all of our readers. Their statement, we believe, may be accepted without qualification, for this company has gained the complete confidence of all medical men familiar with their products. Their exhibits at medical meetings have attracted unusual attention, and their work has been accepted as the work of honorable, scientific men.

The company and its products are worth knowing. All their pharmaceuticals are put up in splendid fashion, and made attractive to both physician and patient.

THE MOOR (MUD) BATHS

There is a large class of men who are on the verge of both physical and mental breakdown from overwork. It sometimes requires courage on the part of a physician to tell these men frankly that their only hope of avoiding premature collapse and, possibly, premature death, lies in rest and recreation, with proper supervision of both the rest and recreation in a good health resort.

All physicians know this, but too many lack the courage to say it. The physician who does say it is sure to get his reward, for the patient in such condition has hindsight, if he does lack foresight, and once saved he will become a grateful man.

An excellent place to send such patients is Grand View Health Resort, of Waukesha, where the Moor (Mud) Baths are given, and where the best forms of recreation can be found, with excellent accommodations in a modern fireproof building.

ALKALOL IN HOT WEATHER

A doctor was talking to Mrs. ————, who had called to see him prior to starting on her annual vacation. He told her to be sure to put a bottle of Alkalol in her grip. Hot weather is hard on the skin, and also on mucous membranes. One is apt to take a cold or a sore throat, or have an inflammed eye, or suffer from prickly heat or sunburn, or poison ivy, etc.

Alkalol is made especially to help the cells of the skin or the mucous membrane to help themselves.

It is, therefore, cooling, healing, and it can be depended upon. It is of the proper salinity, correct alkalinity, and adequate physiological salt content. Alkalol, being hypotonic, secures a passage of needed salts into the cells, instead of provoking excessive secretion. Alkalol is good in summer, fall or winter. A trial will convince.

Reason-why literature and sample on application to The Alkalol Company, Taunton, Mass.

PARKE, DAVIS & COMPANY

The history of the manufacture of pharmaceuticals in America is to be found almost complete in the history of the house of Parke, Davis & Company; and no small part of the history of medicine, at least on the side of drug medication, is also found there. Their experimental work, often done by men of world-wide reputation, and in laboratories perfect in appointment and unstinted in expenditure, of both money and effort, has given the medical profession many notable products.

The house has grown big, and it has the reward and pays the penalty of bigness in business. Its reward is the good-will of many thousand professional men; the

penalty is a severe hurt and a heavy loss if their claims for any product disappoint the profession. Thus it is evident such a house must be conservative in its statements, however enthusiastic it may be in its beliefs, especially about things new and untried in the daily routine of medical practice. Naturally, these conditions make for the best interests of the people.

It is a pleasure to record our utmost confidence in the house of Parke, Davis & Company, and to know that the medical profession of America holds the house in high esteem.

ANGIER'S EMULSION OF PETROLEUM

The medical profession has been somewhat slow to recognize, what now seems plain, the office of a lubricant in overcoming constipation and auto-intoxication. All oils, of course, will not serve this purpose, for some of them produce the opposite effect. Among the notable successes in this line is Angier's Emulsion of Petroleum, which has long been used as a successful lubricant, particularly because of the following qualities:

1. It touches all parts of the solid intestinal content.
2. It facilitates the digestive process and aids assimilation of food.
3. It does not upset the stomach.
4. It is palatable, and is never rejected by the most sensitive stomach.
5. It will not cause seepage.
6. It is miscible with water, milk, etc.

The Angier Chemical Company, of Boston, will gladly send literature and samples.

GLYKERON

A generation or more ago, the sentiment of the medical profession was in favor of descriptive names of ethical remedial agents; the opinion prevailed that names indicative of the composition of pharmaceutical agents offered ample protection against confusion. It was in conformity with this sentiment that Glyco-Heroin was selected as the most appropriate name for what has come to be one of the most universally esteemed respiratory sedatives.

But experience ultimately proved that the non-descriptive appellation affords a much greater measure of protection against confusion. Accordingly, "Glykeron" was selected as an alternative name for this preparation.

"Glykeron" and "Glyco-Heroin" now being synonymous appellations, and familiar as such to all dispensing pharmacists, the physician may use these names interchangeably when prescribing what was originally known only as Glyco-Heroin (Smith). Since Glykeron is the more distinctive appellation, its use is suggested to physicians when prescribing this well-known preparation for cough, bronchitis, pneumonia, phthisis, whooping-cough, and kindred affections of the respiratory system.

ANASARCIN

The doctor who depends upon the diuretic effect of digitalis is often disappointed, for its action is more or less uncertain and the cumulative effect of digitalis always suggests possible danger. Cases of dropsy, general anasarca, etc., should not be treated by merely attempting to increase the secretory activity of the kidneys, because, just as soon as the effusion of fluid into the tissues becomes at all marked, circulatory stasis exists. This means back pressure upon the heart, with a resulting strain upon that organ which enfeebles its action and aggravates the condition. On the other hand, the rational, as well as the most effective, treatment of dropsy of any kind will be found to lie in the administration of Anasarcin Tablets, or of Anasarcin Elixir. Anasarcin Tablets contain certain active principles of squill, which act directly upon the heart to regulate it and strengthen its contractions, and so enable it to overcome stasis in the circulation. Combined with these active principles of squill are other agents which are markedly diuretic, both as regards the stimulation of increased fluid output and also of urinary solids. Where the diuretic element is most prominent, the indication is, of course, for potassium nitrate, which forms the basis for Anasarcin Elixir with adjuvants which increase and prolong its diuretic action and effect. The literature of Anasarcin is interesting, and the Anasarcin Chemical Company has recently distributed a very instructive and interesting "Diagnostics of Renal Diseases." Any physician who has not received a copy should write for it, as well as for literature and samples. The Anasarcin Chemical Company, Winchester, Tenn.

ASSURED THERAPEUTIC RESULTS

Assured therapeutic results can follow only the administration of active remedies. Extemporaneously prepared preparations, in lieu of time-tried and clinically proven products, especially where dependence must be placed upon crude drugs of uncertain strength due to improper selection or deterioration from age, has resulted in dissatisfaction to the physician and disappointment to the patient, who has a just right to expect benefits as a result of the remedy prescribed.

Hayden's Viburnum Compound is prepared with that care, both as to the selection of drugs and in the proper combining, to make it a perfect and dependable product which is impossible where a substitute formula is extemporaneously prepared from the stock and with the limited facilities of the average drug store.

If in the next case of dysmenorrhea, you will at least give Hayden's Viburnum Compound a trial, administering it a few days prior and during the menstrual period, we are confident that your patient will experience the same beneficial result as has been the case during the many years Hayden's Viburnum Compound has been before the profession.

In amenorrhea, menorrhagia, and metrorrhagia, Hayden's Viburnum Compound has proven of unquestionable value and as its reputation has been built up and maintained solely upon its merits as a reliable remedy in the treatment of diseases of women, we are confident that if you will use it in your next case, you will be as well satisfied, as have been those who have for years placed their dependence upon it. We would be glad to send samples and literature upon request. New York Pharmaceutical Company, Bedford Springs, Bedford, Mass.

SALVARSAN
(ARSPHENAMINE-METZ)

	per ampule
0.1 gram	$ .60
0.2 "	.75
0.3 "	.85
0.4 "	1.00
0.5 "	1.25
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NEOSALVARSAN
(NEOARSPHENAMINE-METZ)

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Dosage I,	0.15 gram	$ .75
" II,	0.3 "	1.00
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MILITARY EXPERIENCES IN CAMP*

BY M. C. JOHNSTON, M. D.,
Captain, M. C., U. S.
ABERDEEN, SOUTH DAKOTA

I presume that the majority of the men here have been in the war game, to some extent at least, during the last two years. All of you have read the articles published in the professional journals about this and that treatment for influenza; the statistics of pneumonia cases in this or that camp; war surgery; etc., until the subjects well-nigh cease to command your interested attention. I have talked with, and read articles from the pens of, many of our medics, each of whom apparently was a vital instrument in winning the war, and I have come to the conclusion that possibly the personal experiences of one who did *not* have much to do with the war—one of those who did not get across—might interest you, if only because of the dissimilarity.

I was commissioned only in July, 1918, so cannot speak with that authority which one older in the service might command. On receiving our commissions, you will remember, we were informed that supplies of clothing could be purchased in camp. All we would need was a nice uniform to present ourselves in. We found the opposite to be the case. Very little serviceable duffel could be purchased of the quartermaster, *but* there was always the store of somebody or other, conveniently near, where the goods desired could be had at prices which regular dealers at home would have blushed to demand.

The pronoun "we" is more appropriate in describing these memoirs, as there were always several of us getting the same dose.

To begin: We disembarked from the train in Chattanooga, a small matter of eight or nine miles from camp, in the midst of a pouring rain, and rushed all over the town in said rain, looking for a telegraph office, for the purpose of letting those left behind know that we had gotten thus far on the road to France, with no casualties worth mentioning, although several of the "boys" had already lost their baggage, and one or two seemed to be suffering from acute cerebration or *inebriation,* but it may have been simply nostalgia.

A newly made officer naturally expects to arrive in camp unheralded, but would not be surprised if some of the home folks had tipped off his departure and the band would meet the train to welcome the new arrival to camp. He had visioned to himself marching up to the C. O., saluting stiffly, and getting rid of something like "Sir: Pursuant to G. O. W. D. No. 786, Capt. Bohunkus has the honor to report to you for immediate duty," the general starting up with a glad smile and outstretched hand saying, "I'm certainly glad to welcome you, my boy, the war can now proceed. We have needed your services greatly, and hope you will enjoy your stay among us, as much as we shall your invaluable services." After which he would call his aide-de-camp, and have us transported in his automobile to our camp quarters, or the hospital, where we would be introduced to our command and placed in charge.

*Read at the Thirty-eighth Annual Meeting of the South Dakota State Medical Association, at Watertown, May 21 and 22, 1919.

What happened? We rode to camp through the rain, then walked, carrying a couple of suitcases, over or through about three-quarters of a mile of nice mud track; slunk into headquarters; found a top sergeant in command; were told to sit down on a long bench with some thirty others, and wait our turn. After a wait of about two hours, a supercilious corporal beckoned us to come inside the fence, and sit facing him and his typewriter, while once again our family, personal, and other history was taken. We were then handed a card, and told to sit on the bench again until called for. After another hour's wait, an orderly was told off to march us through rain and mud to battalion headquarters. En route we were hailed from the Dents' quarters: "Hello, Doc, how's all the folks at Punkin Holler? Did you sell your Ford?" etc. At battalion headquarters we stood around, unnoticed, watching the non-coms pound the typewriters, until the battalion commanding officer was ready to see us. He took fifteen or twenty of us "watchful waiters" into a side room, and gave us a nice little talk about how glad he was to see us, and informed us that we were here for military, as well as professional, training, and that, for the present, we could get along nicely without any insignia of rank. We would, to all intents and purposes, be buck privates, and members of the awkward squad, but we were a fine class of men in a fine service, and, while there would be many things hard for us at first, we must nourish "esprit de corps," and "do it well, do it cheerfully, do it now." Then we were told off to quarters, where we found a large room, roughly finished, crude oiled floor, with a number of iron cots, but no bedding. We started out to try to locate our baggage and bedding. It was raining all the time. Some of us who had had camping experience started a fire in the one stove, as it was chilly and damp. One or two tried whistling to keep up their courage. Most of the boys were just a little hurt that Uncle Sam had not paid a little more attention to the arrival of such prominent members of the medical profession.

I succeeded in locating my baggage and bedroll finally, and got to quarters with them about 7 P. M, tired and wet, but still buoyed up by the idea that probably the others had had to go through with similar or worse experiences, and that it was all for "the cause." That evening we were visited by our company commander, a Captain White, of Aurora, Ill., who gave us some good advice about always being punctual at meals and roll-call, and who presented us with the program of the morrow's exercises. It read something like this:

5:30 A. M. "Get up in the morning."
5:45 A. M. Roll-call and setting up exercises.
6:00 A. M. Shave, cold water.
6:15 A. M. Shine shoes, etc., make bed, tidy up barracks.
6:30 A. M. Breakfast (we were there, as we had had but one meal the day before, and had walked several hundred miles in the interim).
7:15 A. M. Drill.
8:00. Go to Auditorium for physical examination.
9:00-12:00. Lectures at Auditorium.
12:00. Dinner at Mess Hall, three-quarters of a mile from Auditorium.
1:00 to 5:00 P. M. Lectures.
4:00. Go to Infirmary and get shot for typhoid and vaccinated.
4:30. Quiz on lectures.
6:00. Supper.
7:00 to 8:00. Silent hour for study of lectures and problems.
8:00 to 9:00. Study hour or hour for discussions.
9:30. Taps.

Between times we could go shopping, arrange for mail delivery, laundry work, get clothes cleaned, etc.

The barracks buildings were about 20x96, one-story frame building, planned to hold thirty-two cots, allowing 6x8 feet floor space for each man.

The prescribed form of dress was service hat, O. D. shirt, black four-in-hand tie, leather puttees, and brown shoes. Any variation from this subjected the offender to a "call down." I arrived on a Thursday morning, and have already described the first day's happenings fairly accurately, I think a description of what I did in the next two days may be fairly typical of what happens to all the new men, so will give it as it happened as near as I can remember.

I got "canny" right at the start, and shined up my shoes and puttees before going to bed, so when the bugle blew in the morning I was out and dressed in time for roll-call, after which we had twenty minutes setting-up exercises, so called, but from the antics of some of the old "prostatics," trying to do the "nutcracker," with all four feet spread at once, and numerous other similar stunts, it might well have been named otherwise. I am sorry not to have a movie film of our first few setting-up drills. There were

about three in our company who had never in their whole lives done anything less dignified than ride behind a coachman and pair, or sit in an upholstered arm-chair in some private office; and the way they looked when attempting to follow the movements of our instructor, invariably about one and one-half counts behind, and trying to do two or three stunts at the same time, was highly amusing, to say the least. You could fairly hear their old joints creak.

After this drill I found time to shave before breakfast. Thinking there might be some mail which the carrier had overlooked, I went to the post-office to inquire, right after breakfast, although I had seen him three times the day before and left instructions each time, to deliver anything for me at Co. 25 A. Barracks, Bn. 7. It was only about three-quarters of a mile from the barracks to the post-office. The "non-coms" in charge of company headquarters had informed me that my mail would be delivered there and brought from there to the barracks four times a day, but I had heard a lot about non-delivery of mail in the army, and made up my mind, mine would not be lost through failure on my part to inquire for the same.

From 8:00 to 10:00 we drilled, marching formations, not manual of arms, regular infantry foot drill. At 10 o'clock, I went to the post-office again, fearing that possibly the clerk there might have my identity confused with someone else's. From 10:00 A. M. to 12 M. we had lectures on some of the most important things connected with army regimen, such as first aid, rations, daily sick report, requests for supplies, how to dig latrines, how to save the grease from slops, and numerous other very important subjects. It is peculiar, but none the less a fact, that every man who lectured to us, and there were about eight each day, had the most important item of our military education in his keeping. Well, that showed that our instructors were at least enthusiastic in their jobs of converting a bunch of second-hand hand-me-down "docs," into spruce, new military members of the Medical Corps, with their "guts sucked up," in the shortest possible space of time,

At 12 M., on the way to barracks for noon chow, I stopped a few minutes at the post-office to inquire for my mail, and consequently got to the table about ten minutes late. Once was enough. Take it from me, the man who was late to meals in that company went hungry. The cooks evidently sized up the capacity of the crowd about ten short, and the late-comers invariably had to fill up on bread and butter and coffee. There was always enough of that, such as it was. It would have done your heart good to see that crowd eat after sleeping all night and working hard at physical and mental work all day, with no time to loaf or let down, but kept at high tension all the time. The way they rushed the "dining-car" would have put to blush any crowd of hungry threshers you ever saw. They devoured enormous quantities of good, coarse foods, of a quality and served in a manner that would have caused a row in several of their family circles, had like service been instituted at their home tables. But the "esprit-de-corps" was fine. Every man, without exception, played the game, and apparently enjoyed it.

At 1 o'clock I was ordered up for oral examination in medicine. I was quizzed about a half hour by a kindly faced old chap, whom I afterward knew to be a lieutenant-colonel, whose main object apparently was to get me "at ease," but whose questions nevertheless showed as extensive knowledge of his subject.

I got through about 2:00 P. M.; went to a lecture on daily sick report, which lasted one hour, then went to the post-office to see if I had any mail yet, but found it *not yet;* then went to the infirmary according to orders, and got my physical examination. I was stripped, along with forty or fifty others, and marched down the line, thumped, pounded, etc., and passed on into the next room where one man vaccinated me on one arm, while another shot me with typhoid lipovaccine in the other. I retrieved my clothes, and just had time to get to the post-office and back before the "nut" examination came off. There wasn't any mail for me and I began to fear that something was wrong. Here I had been in camp nearly two whole days, and no mail yet!

The psycological test of mental efficiency, commonly called "nut exam," was waiting for me. It baffles description, but it is certainly a fine test of a man's ability to think quickly and accurately along lines entirely foreign to his ordinary methods of thought.

I took it as part of my initiation, and, as I had already joined the Elks, K. P.'s, Masons, M. W. A., R. A., M. S., and a number of other societies, it did not phase me much, but one poor fellow in Battalion 6 went stark raving mad through worry over the exam, and had to be kept in a straight jacket for months, to keep him from committing suicide, through fear that he had not passed.

After this exam which lasted about one and

one-half hours, I went up to the quartermaster's store to get an extra shirt and some other things I needed, but found it closed. Got to barracks about half past five, and found the place deserted, except for five or six boys reading up on lectures. I had torn my breeches the day before, and thought this a good time to make repairs, so took them off and was sitting on my cot busy sewing, when a lieutenant with a dignified air and a bunch of whiskers on his chin, came in the door, preceded by an orderly who announced, "officer of the day." I had never heard of such an animal, and, besides, was busy and he didn't look like much anyway—only a lieutenant, and I was a captain myself, so I kept on with my sewing. *"Men will rise, and come to attention when the officer of the day is announced,"* he bellowed, glaring in my general direction. Well, I wasn't exactly in shape to stand at attention, so I calmly ignored his request, and went on with my sewing. He was one of these important ducks who never have any chance to boss anybody at home, and his language or manner toward me was not nice, but I considered the source and let it pass.

Well, he went away, after a brief glance around, and I put on my breeches, and found I would just have time to go up to the *post-office* before supper, if I walked fast. I just made it before closing time, but the delivery clerk seemed bored, and informed me in a tired voice that there was nothing for me, so I beat it back to the barracks through the wet (it was raining again, or *yet),* and I arrived just as supper was called.

We had canned salmon, canned peas, sweet potatoes, bread and butter, canned milk, tea, and custard pie, but we were cautioned not to overeat, especially those of us who had been "shot" that day. I had heard several of the older men talk about the effects of the typhoid vaccine, but thought I was a "tough guy," and rather ignored their chaff. After supper I strolled over to the telegraph office, and sent a wire home, that I was still in camp, and not numbered among the casualties. Alas, how little I knew of what was so soon to befall me!

I returned to quarters, and found the men clustered around the bulletin-board, studying the orders for next day, which was Saturday.

I studied a couple of hours on drill regulations, and then went to bed, tired and sleepy, and was soon asleep. Some time in the night I awoke with a start. I had been dreaming—oh, such dreams!—I was in forest fires, and dragged through icy torrents, and mauled by wild beasts too numerous to mention. When I awoke I found my teeth chattering, and I was in the grip of a decided chill. All about me I could hear the raucous snores of some and the fearful groans of others, until the place sounded, I am sure, much as an inferno might. There was a stir in the cot next to mine, and old Daddy Doyle, as we affectionately termed him, rolled over and whispered, "You got it, too?" "Got what?" I answered through clenched teeth, "Call the guard, I'm dying." "Oh, nonsense," said Doyle, "it's just the vaccine working." Well, that was some comfort. I had forgotten the vaccine; but I had no idea it was anything like this, and thought I had better take one of the tags off my trunk, and write the name and address of my wife on it and tie it to my toe, in case I died and lacked identification, but I went to sleep again before getting up courage to perform said task.

I awoke next morning sore and stiff in every joint, but glad to be alive, and after a few tentative efforts at movement I found I was not so worse, so got up and dressed. I was one of the few from our barracks who answered roll-call. I later found that it was the regular thing to excuse the men from active duties for forty-eight hours after vaccination, but I was feeling better all the time, so kept going. The routine was much the same as the day before. In the afternoon we were informed that our company would be expected to take drill in gas defense the next week, in addition to our other work.

Sunday we loafed, washed clothes, mended, wrote letters, read up on our lectures, and walked around camp, or went in to Chattanooga, as we pleased. Camp Greenleaf is located on the site of the battle of Chickamauga, Missionary Ridge is on one side of the camp, and Lookout Mountain on the other. The grounds are thickly studded with historic monuments, telling of different regiments or commanders and their deeds. The place is very interesting, and is an ideal site for a training camp.

We got trained in everything, from how to fold our blankets and do our chamber-work, up or down, to how to fold a saddle blanket and do valet work for the horse.

The lectures, of which there were about six hours a day, were all by experts in their particular line, mostly old army officers, who had seen lots of service and knew what they were talking about. We were quizzed an hour or two each day on the subject matter of the lectures, and drilled from two to four hours daily, so that none

of us suffered through not having enough to do. Still the men were like boys out of school. Grey-headed and grizzled, heavy paunched men of commanding mein and dignity to spare—at home—here lost it all or had it *taken from them.* There was one chap, commissioned major, a specialist from New York City, who tried to preserve his dignity, but lost it as follows: A formal note was delivered to him, "through channels," requesting his presence at the barracks of one "General Latrine." Our doughty major cleaned up his shoes, brushed his clothes and teeth, manicured his nails, and started out to locate the General's quarters. He returned at dusk, tired and wiser. The boys had kept him on the run all over camp, as it seemed that each place he visited, had just harbored General Latrine, but the General had just that moment left for some distant part of the camp, where he might catch him, if he hurried. He grinned sheepishly as he came in to our barracks, but showed the right spirit, as he brought the cigars with him, and we all had a good laugh together.

Orders were that lights were to be extinguished and silence rule at 9:30 P. M. sharp every night. Well, the lights always went out on time all right, but we had a ventriloquist in our barracks, and about 9:35 every evening we would be entertained by Irish or other dialect stories, coming apparently from the roof. The stories that man, who by the way, was a prominent surgeon from Syracuse, N. Y., could tell would make a dog laugh. We all would try to keep silent and obey the rules, but first one would snicker, then another would snort, and soon the entire barracks would be in a gale of laughter, until stopped by some guard pounding on the door and demanding, "Quiet in there."

Well we got gas and gas and gassed for that week, carried our masks to bed with us, ready to be up any time in the night that an alarm might be given. The mask had to be taken from its satchel and perfectly adjusted to the face in six seconds, in order to be safe and pass the man. It will serve to show how diligently we worked when I relate that only three out of our battalion failed to pass this test at our final examination.

I had been in camp just nine days, when orders came from Headquarters to be ready to move. This order included four men from our barracks. We packed trunks, and waited travel orders, expecting anything. The travel orders came three days later, and read, "Proceed to Camp Wadsworth, and report to the Commanding General." We packed up, and left within the hour, being wished God speed by those left behind, among whom we had already many friends.

There was one of our quartet who had served during the Spanish-American War, and he told the rest that we were undoubtedly picked to "go across" at once. He said, "Now we will get into army life in earnest. No more training-camp stuff." We were like babes in the woods, absolutely ignorant of what lay before us.

When we arrived at Spartanburg, S. C., near our destination, we were met by a sergeant who saluted smartly and asked, "For Camp Wadsworth?" We answered in the affirmative, and Captain Guiler, our experienced guide, said, "Now we shall see how the regular army does things. They undoubtedly have an automobile waiting here to take us to camp." They did! This non-com, placed us virtually under arrest, and took us to detention camp, as flu suspects! And that was our military reception. We felt like mobbing Guiler, but he looked as miserable as any of us, and paid for his superior knowledge, for, while they kept the rest of us only three days in quarantine, they kept him a full week, as a contact carrier.

Camp Wadsworth was a tent camp, located five miles from Spartanburg, only the Base Hospital being made up of permanent buildings. The soil, like that in most of the South I have seen, consists of red clay and red sand, and is muddy a large part of the time. Three of us four were assigned to duty in the same regiment, the 384th Infantry, 96th Division. There were about six hundred officers and men in the regiment when we took charge of the infirmary, but the number was soon increased to nearly full strength. It was some change, being boosted from a common rookie to commander of the medical department of a regiment, accountable only to our Colonel and the Divisional Surgeon. None of us knew much about what was expected of us, and we had no efficient non-com help, but by dint of long hours and hard work, we soon had the outfit running smoothly. If you think there is no work connected with the position of Regimental Surgeon, let me tell you what we had to do.

Up at 6 A. M., shave, clean up and breakfast before 7:00. Sick call at 7:00, at which time every sick or injured man in the Regiment must be looked over, and his history recorded—three reports daily in triplicate or quadruplicate of every case. The average number at sick call

at this time was between sixty and eighty men each morning. Then sanitary inspection had to be made daily, which covered everything in the Regimental area, kitchens, mess halls, latrines, baths, stables, streets, tents, and canteens. A daily report on this subject had to be in the Colonel's hands before 10 o'clock A. M. Then we were supposed to drill from 8:00 to 11:30 every morning. The reports had to be made in long hand, as our infirmary was not supplied with a typewriter. We got one finally by making application daily for two weeks. We systemized the work, assigning certain duties to each man each day, so everything got going smoothly in a short time.

I was surprised to find that not all medical officers were good sports and gentlemen. We had one captain in charge of the 321st sanitary train who happened to be our senior by two days' service and who was in charge of the drilling, who certainly could carry the banner in any rough-neck parade ever staged. It was this gentleman's pleasure to ride us fellows who were still rookies when taking drill, whenever the slightest occasion offered. I think he was the most cordially disliked man in the whole camp. I'm thankful to say that I was not under his command, but a number of my good friends were, and they complained bitterly of his overbearing behavior. One lieutenant in the ranks one day, just after a particularly obnoxious performance by this jackanapes, correctly voiced the unanimous sentiment of the whole command, when he stated, "Gosh, his mother must have been damned fond of children to have raised him."

The new draft and "flu" struck us almost simultaneously. We had about one thousand new men join the regiment and, within forty-eight hours of their arrival, four hundred of them were down with the influenza and pneumonia. By strenuous efforts at isolation of contacts and quarantine of suspects, we stopped the epidemic very promptly, with but twelve deaths, but it meant a lot of good hard work. In addition to our regular routine, we took the temperatures of one thousand men twice daily, besides inspecting their throats, and swabbing and making cultures from all suspicious cases. We inspected all tents after taps every night, to see that they were not overcrowded and were propertly ventilated, there being a camp order requiring the sides of all tents to be rolled to the eaves. When you consider the fact that it was raining about four-fifths of the time, you will see that the job was no sinecure. There were plenty of horses in camp, and I managed to get in an hour or two each afternoon, riding over the country roads in search of adventure and persimmons, of which there were plenty, and so relieved the monotony of routine work to some extent. Captain Guiler accompanied me one day, but as his horse was a little rough, he quit after a couple of miles, refusing to go thereafter and taking most of his meals standing for awhile.

We had gotten the regiment running at top speed and were going fine, expecting orders for France at any time, when the armistice was signed, and we were ordered demobilized. In a way we were sorry to quit, as we had formed the acquaintance of a lot of fine fellows, and did not feel that the Huns had been sufficiently punished, but the "flu" was raging, and they needed us at home, so we went to our several posts and dropped our military mantels, resuming our titles and emoluments as "Docs," once more, most of us physically and mentally benefited by the experience.

COMMON FORMS OF MENTAL DISORDER AND THEIR TREATMENT*

By W. A. Jones, M. D.
MINNEAPOLIS

To maintain an existence in the present world, every animal must be equipped with instruments of protection in order to defend himself against invaders. This condition exists among the lowest forms of animal life, and increases in efficiency according to the higher grade of development. The spider has its spinning-glands, the adder its sting, the eagle its talons, the stag its horns. These animals, and numerous others similarly endowed, possess a nervous system of inferior order; but man possesses a weapon of greater subtlety and power than any other members of the animal kingdom. His brain is his weapon. This means that it must be delicately adjusted; it must have the capacity for adapting the in-

*Read before the Minnesota Academy of Medicine.

dividual to his environment in order that he may be made master of the animal, vegetable, and mineral worlds. He controls the minutest microorganisms, and from them all animal life up to the ponderous elephant. He is able to modify the forces of nature, to resolve matter into its constituent elements, and to recombine them to suit his own purposes, and even to discover elements millions of miles beyond his reach. Of course, such an instrument, delicate in its organization, is liable to be thrown out of gear; and it depends upon the great organs of the body, the heart, the lungs, the kidneys, the digestive tract, and the endocrin glands, for its force and power. The result is that any disease may react upon the individual, but its reaction is more serious if the individual is of an unstable type,—that is, is of either an inferior nervous system, or a nervous system which is unable to maintain its independence or to withstand the shock and strain of injuries or diseases.

The nature of the human mind has always been a fruitful subject for discussion, and it depends upon the type of man and mind whether his ideas are those of self-admiration, or whether he is simply speculating upon the possibilities of human nature. The animal mind is probably dependent upon the functions of the body in general, and it should not be classed as a "thing," but as a process of "mentation," having its physical basis in the brain. The pyschiatrist should not limit himself to the study of mentation, but he should go beyond that and analyze the individual. The personal and family history, which we all attempt to record, is more important than almost anything else, in deciding, not only the physical, but the mental, characteristics, of the individual. Perhaps we are impressed at first with the fact that our patients are egoists,—that is, that they consider self more than anything else. They have their longings, their ideas of something better, but their egoism is practically a normal state of mind. For instance, if one man suggested that he would like to be like Rockefeller, he does not really mean that he would like to take his place, he simply means that he would like to have Rockefeller's opportunity and his millions. That is a part of his egoism. We cannot shed our ego, and we really cannot get at it. It is one of those things that we talk about and think about, but we all arrive at the same conclusion that the Right Honorable R. B. Haldane, M. D., did when he said that "the ego is a mere asymptotic regress toward a notional poor subject of knowledge,—a thinker without a thought; an abstraction; nothing at all." This definition conveys what we know of the ego. We must take into account the personal differences, too, when we study the mental constitution of normal individuals, with their varied types, their inherent tendencies, and their acquired tendencies which education and environment have given them. We must remember that sensation is more acute in some people than in others, that touch and pain are keener in town than in country folk, keener in whites than in negroes, and keener among the educated classes, and probably keener in men than in women. Women, then, are less sensitive than men, but a woman's motor response to a stimulus is more ready than a man's. When a woman loves, she loves with her whole soul, because love is her whole life, and to a man love is the joy of life. Consequently women are more altruistic, and men more egoistic. We must consider, then, that mentation and all of its divisions are indissoluble, due to the fact that there is an enormous wealth of association fibers existing in the central system between and among the physical bases of all mental processes. We must study perception and association of ideas, the affections, the motor activities, attention, fatigue, and sleep, the sentiments with their esthetic, moral, and intellectual viewpoints, their different modes of belief. We study language with gesture, pantomime, and words as symbols of mentation; and then we should study quite seriously the psychology of the insane, and this leads us to the disorders of the above-mentioned divisions which include sensation, perception of ideas, emotions, disorders of conduct, erroneous judgments or delusions.

More than the above, we study the physical disorder of the individual. Acute or chronic physical disorders or diseases are of infinite importance in the determination of fundamental causation of certain types of insanity, and we must extend our horizon above heredity, alcoholism, and the various eccentricities. We now believe that quite commonly among the causes which are called acute are many types of infection of a more or less serious nature, and, although the much-written-about condition of the teeth and tonsils is looked upon askance, they evidently have a very striking influence in the development of the mental disorder among those who are either constitutionally or acquiredly unstable. Infections of this type make gradual inroads on the blood-stream, and not infrequently, there-

fore, it is difficult to diagnose the cause for a mental or physical disorder. Disorders of the digestive canal throughout its entire course, together with the accompanying interruptions of the glandular system of the body, may be looked upon as a common source of danger and a frequent cause of a psychosis. It is quite common among patients to fix upon an idea as a cause of their mental disturbance, and yet, when this idea is carefully analyzed, it is really only a symptom of mental deterioration. The physical tire, the exhaustion and strain upon the nervous system, together with the influence of unhealthy metabolism and consequent absorption from the digestive tract, are not infrequently the fundamental cause for many of the mental states that we commonly see. I am still quite sure that heredity is an important factor in the causation of insanity. Whether it be direct or indirect, whether it be among present generations or is atavistic in type does not change the fact that it is an important factor. Even in the commoner forms of mental disease, the physical stigmata of degeneration are very frequently observed. This includes the shape of the head, the frequent anomalies of construction, and deformities of the ear, the palate, the jaw, and the limbs. All must be considered as factors for investigation.

It will be impossible in a paper of this kind to take up more than the well-known forms of mental disorder; consequently I shall refer only to the states of depression, excitement, stupor, and dementia. Periodicity is a normal characteristic of mental function, as is shown by our waking and sleeping hours, the advent of a woman's menstrual period, the young man's rapid growth and development, and the period of the climacteric, which occurs in both men and women. We are all periodical in our lives. We are either lazy or active. We usually migrate when possible, in order to change our viewpoints. The same law of periodicity, which is normal, applies equally to the abnormal, and shows itself by the abnormal mental disorders. The majority of people who become insane have a mental instability,—that is, they are unable to maintain their equilibrium, and they are more likely to show their mental disorders in the third decade of life, although the intervals between their periodical attacks may be from five to twenty years. Close analysis will not infrequently demonstrate that people are up and down mentally,—that is, they are either depressed or exalted. They are influenced by the human tides, which go and come with a fair degree of regularity every twenty-four hours, and their mental disturbance may show a similar depression or exaltation covering a period of days, weeks, months, or years. These forms of intermittent mental disorder, or even the periodic forms of insanity, run in circles, and the time required to reach the summit of a circle and its lowest rim varies with different individuals. Finally the circle becomes smaller, and ultimately the individual revolves around a very small space, still a circle, but growing more and more concentrated. Consequently these forms of intermittent insanity are likely to terminate in dementia.

The term "depression" covers a very wide territory, and is too commonly interchangeable with the word "melancholia." Depression may exist simply as a fit of the blues, or it may become a little more pronounced, last a short time, and clear away, or last a longer time and gradually subside. People who are depressed lack energy, and this lack of energy is due to a muscular weakness, and involves those muscles which control the large movements of the proximal joints. The simpler types of depression are characterized by the absence of delusions. These people are depressed without apparent cause, and yet there must be a causative factor somewhere, perhaps it is a mild illness, a mild infection, or overstrain, in which the nervous system, rather unstable, becomes irritable and unable properly to perform its functions. As a rule, people who are depressed are not well; not infrequently there is a loss of weight, a change in color, a dryness of the skin, an abnormal condition of the secretions, which involves the hair and nails; not infrequently a decided or, at least, a demonstrable anemia is present, the temperature is a little subnormal, but irregular. The disturbance of the digestive tract is almost invariable. The patients lose appetite, and they suffer discomfort in their digestive organs. Their intestinal and glandular juices become deficient, with a resultant hardening of the feces; and yet an examination not infrequently reveals no demonstrable sign of disease, except that the urine is diminished in quantity and increased in specific gravity, unless they are taking large quantities of fluids. The average person with depression does not shed many tears, because with other disorders of secretion the tears are fewer in number. The generative functions are disturbed in both sexes, much to the misery and discontent of both the man and the woman. In the man the sexual act is out of harmony with his state of agony or

misery. In the woman there are a loss of her menstrual flow and a sexual indifference. Headaches are not very common, except the patients complain of a feeling of pressure on the top of the head, as a rule. As the depression increases, it may assume various types, which are due to what the patient does and what he thinks.

Under the first heading we have the stuporous depression, the agitated depression, and the resistive depression. Under the second heading come the simple types of depression,—the hypochondriacal depression and delusional depression. Those who are stuporous show it by defect and absence of voluntary movements; those who are agitated, by an excess of certain movements; and those who are resistive, by their pugnacity when being attended to or cared for by others. The hypochondriacal types speak for themselves, and the delusional types are usually quite in evidence, because the patient exhibits his peculiar ideas concerning himself or others.

Probably no form of mental disorder is so agonizing and accompanied by as much suffering as is the depressed. They show their discomfort by the expression of the face and the slowness of action and the fear which is constantly enveloping them. They change in their minor characteristics; they shake hands like a wooden Indian. They are uninterested and refuse to be drawn into conversation or discussion. They are indifferent to the condition of others. They have no thought for disasters, nor do they show any manifest interest in what is going on about them. In fact, they develop what someone has aptly called a muscular paralysis. Their voices are weak, and they take less trouble to express themselves than would be expected of a sick person. They vary in their symptoms, and not infrequently develop the various types which have been already referred to, alternating in character, existing over temporary periods. They are unable to write, because it is a trouble and probably because it requires attention and effort, which they are unable to carry out on account of their mental fatigue. Many of these cases of depression eventually come down to a very narrow point of view, and they simply utter a few commonplace phrases, answer only the simplest questions, and then evidently with great effort. The loss of ambition, loss of energy, and inattention to the things about them, are very characteristic of depressed individuals. They are, unfortunately, sleepless, and when they sleep they awake unrefreshed; and they have bad dreams. The time of day when their depression is most evident is in the early morning hours, but in the afternon or evening hours they show a little more interest, or have a little less depression. Every person with depression is a potential suicide, and has to be watched constantly in order that he does not do himself bodily harm. The depressed patient is unable to get at true values, and, if he once loses sight of the fact that his depression is due to a physical disorder, he becomes illogical, and his judgment is erroneous. He feels that everything within him,—his instincts, his will power, his emotions,—has ceased; and this gives rise to the deluded type, who lose faith in everyone, including themselves. They think they are eternally damned, that they have committed the unpardonable sin; and when they feel so 90 per cent of them do not know what the unpardonable sin means. Among the women who are depressed, the idea of pregnancy is quite common, although there is no foundation for it, simply because they have an amenorrhea, and they not infrequently falsely accuse themselves of adultery and misconduct.

The outcome of depression, unless caused by arterial disease, or by disease of the heart, kidneys, or endocrin glands, is usually favorable, although the prognosis depends greatly upon the individual, his physical and mental construction, and his early environment. Then, too, the improper care of these people makes the prognosis more or less difficult to determine, but, if it is occasioned by removable conditions, such as blockading of the secretions, auto-intoxication, together with nervous wear and tear, the prognosis is usually considered as good.

The duration of these attacks varies, but it is commonly conceded that, if within six months the patient should not be on the road to recovery, he is very likely to be classed among the chronic types. These people do not become demented very often, and, even if they are chronically depressed, they have a chance for recovery.

The treatment of these patients is very simple. They should be first removed from their present environment if possible. They should be isolated in a hospital, and should be promptly put in bed where they can be examined carefully and thoroughly and observed for a sufficient length of time; but the prime factor in their treatment is rest, mental and physical, and this is included in the isolation, and should include the absence of all family ties, and here is our greatest stumbling block. The family and relatives of these depressed persons are unreasonable, unthinking, ignorant, and determined that they know more

than the physician. The result is that these people are not rested long enough, they do not have the opportunity for recuperation, and consequently they become worse under family friction or family control. They should be treated like any other sick patient. If the condition is due to blockading of the secretions or to autointoxication, the best results are obtained from hot packs, lavage, high colonic flushing, massage, and liquid foods until their digestive organs are in reasonably good condition. Then the diet may be increased, but should be maintained as a plain, wholesome diet, with caloric values. Most of these people need overfeeding—that is, they should be fed from four to six times in twenty-four hours. This, to my mind, is a very important factor in the recovery of a depressed person. Rest and food, and the adjuncts which make it possible for the digestive tract to take care of the food supply, are the real secret of success in the relief of depression. These patients should be carefully observed and thoroughly protected even if they have to be put in restraining apparatus. They should not be annoyed or disturbed needlessly, but should be given an opportunity, not only to rest their bodies, but to rest their minds. Consequently all things of interest, all things which attempt to take them out of themselves, should be left severely alone. Quite commonly the physician is inclined to suggest to the depressed person that he needs travel and distraction. This is a pernicious form of advice, and sending a poor, tired, depressed individual from place to place, to see new things, to seek new pleasures, is detrimental to his mental health, as well as to his physical condition. Too many of these invalids travel around the world or from country to country, seeking health when they should be in a well-equipped hospital in bed, where they could be taken care of by trained observers. As they get better and stronger and begin voluntarily to show an interest in things, then some light occupation may be supplied, but even this should be done with the utmost caution, because they are easily fatigued, and may rapidly return to their depressed state. It is not difficult to induce rest, because, as a rule, when a patient has been cleaned up inside and outside, washed out and watered, he feels so much better that he is more quiet, and is willing to stay in bed.

These people need some medication, something to make them sleep, and there are but few things upon which we can depend. One is the proper adjustment of their foods, the overfeeding at night and the watering of the tissues with various liquids. We are commonly obliged to use sedatives and hypnotics, and, in spite of the advocates of baths and foods and the absence of drugs, opium still holds its place as a safe and comfortable agent. It is necessary to give enough opium to produce a physiological effect, and from one to four grains three times a day is not an excessive dose, and for some reason is does not interfere with or dry up the secretions of the body, neither does it cause the constipation that is so commonly accredited to it, if the channels are kept well watered and oiled. Veronal, in from seven and one-half to ten grains or even in doses of five grains three times in twenty-four hours, may be necessary in addition to the opium, or without the opium, according to the grade of depression. Sulphonal is not recommended, neither is trional. One is depressing, and the other is inert. Not infrequently it is necessary to stimulate the gastric functions by the use of hydrochloric acid and bitter tonics. They have their place, and they may do some good; but they are not urgently needed.

The next form of mental disorder is excitement, as the direct opposite of the depressed type; and this is characterized, as you know, by exhilaration, exaltation, noise, and extreme motor activity, which varies in degree as the patient suffers, either from simple excitement or a sudden and acute outbreak, or what is called an acute delirious mania, or the various forms of chronic mania. Not infrequently the excited individual maintains a fair degree of physical health,—that is, he looks fairly well, and claims that he is strong and well and virile, but his general health, as a matter of fact, is below par. He rapidly loses weight; he shows in his expression and his digestive system that he is wasting his energies and that these activities are encroaching upon and causing an exhaustion of his nervous apparatus. Some of his secretory organs are overactive, and he has a peculiar odor. The quantity of urine is increased, and the solids are eliminated freely. In women the menstrual function is either pronounced or irregular, not often suppressed.

These people are generally hyperesthetic, they have no symptoms of muscular weakness or paralysis, and there is no muscular rigidity, but there is tremendous muscular activity and sometimes noticeable tremors. They wave their hands, their tongues are in a constant and perpetual state of motion, and they jerk and twitch and distort themselves by an assumption of atti-

tudes and peculiar postures which are more or less dramatic. The reflexes are usually increased. They have the faculty of very acute perception of sound, something almost uncanny, they can hear at great distances, and their mental processes are in such a state of activity that they take in everything around them at a glance. I remember on one occasion going in to see a young woman who suffered from tremendous excitement. On my second visit I neglected to remove my overshoes, and the instant I appeared she asked me if I was accustomed to visiting sick women in their bedrooms with my overshoes on. These people have no control of emotions; they laugh and cry and are angry for little or no reason. They are erotic; they collect rubbish, tear their clothing, and hoard newspapers and store away useless things. They have a great faculty for self-adornment, and get themselves up in the most outlandish costumes one can imagine, unless they are where they should be—in bed. The association of ideas is very active, and they skip from one thought to another with marvelous rapidity, so much so that they lose all sense of what is said or done. They suffer, not infrequently, from insomnia, because of these activities, and are unable to sleep because they have not time, they have so much to do, and their loss of control of muscular sphere is such that they find it impossible to keep still.

The simple manias are easily diagnosed, because they show an abnormal exaggeration of the individual characteristics. Their deportment and conduct is such that they are looked upon as not only exalted, but boastful and argumentative, and at times brilliant in repartee. Their memory is quite accurate, and they recall events with astonishing rapidity and truthfulness. This form of excitement occurs at almost any period of life. When a patient is suffering from an acute delirious mania there are usually physical signs with the febrile elevation, and they are not unlike the acute alcoholic who has sordes on his teeth and lips and a very heavily coated tongue, which is dry and brown from the excitement, continuous talking, and the inability to take time to swallow liquids of any kind. These people, as a rule, are dangerously sick, and they suffer from the same conditions we find in cases of acute pneumonia or any other acute infection. They not infrequently become rapidly exhausted, and, immediately after the exhaustion subsides, they go down and die in a perfectly conscious state of mind. The chronic forms exhibit the same symptoms as the acute forms, but they last over a greater length of time. They have a wonderful memory. Events of years ago are recalled in a perfectly clear manner. These chronic cases are liable to acute exacerbations, and after a sufficient length of time they drop into the terminal state of dementia. The outlook for these people of the acute forms is encouraging. A few of them, as I have said before, die from seeming exhaustion, but in the light of recent progress in medicine we think perhaps they may die from some other condition, such as lymphatic or glandular states, of which we know comparatively little. The chronic case remains chronic as a rule, although there are some instances of recovery after four to eight years duration, but they come out with a mental reduction that is quite evident to lay people.

The treatment of these people is, again, practically the same as in those who are depressed, namely, rest in bed, the eliminating process through skin and digestive tracts, and proper foods. These people must frequently be forcibly fed, and preferably with a nasal tube. They should never be allowed to exert themselves by wandering about, by undue exercise, or anything of this order. There is no sense in having a patient with an acute excitement continue to let off steam until it is out of his system. These old traditions are now put in the dump-cart, and these acute cases are looked upon as physically sick, and are treated as such. It is not an easy matter to keep a patient quiet even in bed or even under restraint or the influence of a warm bath, but the majority of people respond to a rational form of treatment. The continuous bath is admirable in a few cases, notably those who maintain a good physical condition and who do not suffer too much exhaustion, but the continuous bath of several hours' duration is one which should be most carefully considered. Uusually, thirty minutes to an hour and a half is quite enough. Then, too, the matter of foods is just as important as it is in the depressed type. As a rule, after these patients are cleaned out they require enormous quantities of food, and I have not infrequently given as high as four quarts of milk and cream and twelve to fifteen eggs a day to the excited individual. When the patient has become quiet and more rational he should not be kept in bed too much of the time, he may be permitted to sit up for a little while, just as any convalescent should be. The use of the feeding-tube in excited patients is far better than the crowding process or the forcing open of the mouth with any sort of instrument, for the reason

that the nasal tube is easy to operate, and the patient can be fed liberally that way, and more liberally than by any other method, and not infrequently, too, after a few nasal feedings, the patient is quite willing to take his food by mouth naturally. The question of hypnotics or narcotics in acute states is not so vital as it is in depressed states. These patients may be given a limited variety of drugs, and among them are opium and the occasional administration of small doses of hydrobomate of hyoscine, sometimes with the addition of morphine. In the acutely disturbed, great care should be used in the selection of the drug, for, not infrequently, one gives either too little or too much, and it is very difficult sometimes to arrive at a proper medium. It has been suggested by some authors that the administration of an anesthetic in the acutely excited case is an advantage,—that is, he may be given inhalations of ether or chloroform for a period of an hour, during which time he is given a bath, his clothing is changed, his stomach and rectum are washed out, and he is properly fed. This alone may sometimes change the current of his ideas, and particularly motor restlessness, and be the beginning of a quite natural sleep. The chronic patient is treated only in a hospital for the insane. He is rarely found in sanitaria, although occasionally he may be changed from a state hospital to a private sanitarium, with at least comfort to his friends and relatives, but as for his recovery it is extremely doubtful.

The terminal states are those which result in dementia, which means a mental weakness and inability to take care of himself, a loss of memory, untidiness in dress and habit, and finally the assumption of the postures and attitudes of conduct of the demented individual. Some patients go through several attacks of acute depression or excitement, and only after the sixth or eighth seizure do they become demented; but it is fair to assume that, if the patient has two or three recurrences of his mental disorder, each attack leaves him with a certain amount of mental reduction. He has then the general evidences of degeneration, either arterial or visceral, but he lives on because he is not active, is not depressed, becomes an animal in his tendencies and instincts, and has no worries or disturbances, except as his degenerative process suddenly irritates some other part of his cortex. Not infrequently these people reach a certain period of dementia in which they are able to take care of themselves, at least they are docile, manageable, amenable to training and occupation and habits, which leaves them suitable cases for farm homes or asylums for the chronically insane. They are frequently able to recognize their friends until their dementia is more pronounced, but their instincts and desires are gradually subsiding, light gradually fades from their mental vision, and they become helpless and need the care of an attendant. Lastly, they become bedridden and incapable of anything but reflex movements.

THE CATABOLIN IN DISEASE*

By B. T. Green, B.Sc., M.D., F.A.C.S.
BROOKINGS, SOUTH DAKOTA

Nearly every departure from health is complicated, to some degree, by a toxemia due to the retention in the body of catabolins, those substances which result when tissue material passes from a higher to a lower plane of complexity. These products of retrograde metamorphosis are definite chemical compounds, and are mainly tissue poisons. In health their presence is negligible, but in disease, when tissue-destruction is rapid, the chemical routine interfered with, the body fluids altered, and the emunctory function depressed, elimination is retarded, resulting in retention of the poisonous catabolins within the body. Retention is soon followed by the expression of a definite pathology, and results in a complicating toxemia. The presence of such a toxemia may be readily recognized in nearly every case, whether medical or surgical.

Consider the clean surgical case after an extensive operation: An anesthetic has poisoned the patient to insensibility, and he lives only because certain vital centers have not been overwhelmed; trauma, as well as fear, has shocked his sensory nervous system; he has a wound in which a million living cells have been destroyed and from which the débris must be absorbed; the function of nearly every organ of the body has been depressed; the wound, to say nothing of other operative areas, must heal, and the inflammatory course must disturb other activities; the

*Read at the Thirty-eighth Annual Meeting of the South Dakota State Medical Association, at Watertown, May 21 and 22, 1919.

mere fact of recumbency decreases muscular action, and this failure of nature's normal means of propelling the poison-laden lymph-streams permits stagnation; and the skin, the kidneys, and the bowels, become sluggish, and fail or fall short of their normal action. It is also probably true that before the operation the patient was starved and purged, and that, for several days following, food and often water have been limited. As a result there are, necessarily, a greatly increased rate of tissue-destruction, and a corresponding blocking of elimination. Within twenty-four hours his temperature has increased from one to three degrees; aches and pains are complained of, especially in the back; there are a feeling of mental dullness, drowsiness with an inability to sleep, nervous unrest, dryness of the mouth and throat with a disagreeable taste, an offensive odor from the skin, etc. All this has occurred regardless of the nature of the operation, but is intensified by its extent and seriousness. Every surgeon has observed this picture again and again, and has learned that he must expect to see it, at least in some degree of modification, in every patient operated on. Likewise the internist meets with a similar symptom complex in his medical cases regardless of the nature of the disease.

We thus have a group of symptoms that are somewhat vague and indefinite and more or less common to all disease, but not definitely characteristic of any. The most common symptom complained of is weariness, varying from a feeling of lassitude to prostration. Mental dullness is of frequent occurrence, and may vary in degree from slight mental sluggishness to delirium. Or the nerve centers may be stimulated, resulting in all phases of manifestation, from a mere feeling of restlessness to convulsions. There may be headache, backache, aches in any muscle group or of the entire musculature of the body; neuralgias, vertigo, and blurred vision are commonly present; urticaria and icterus may affect the skin; there may be inflammatory gouty affections; and the temperature and cardiac rhythm may be interfered with.

These so-called "common symptoms" are at least characterized in a negative way, for they are often set aside, and the disease diagnosed by the characteristic findings due to the special pathology of the ailment. They have positive recognition in the course of certain diseases where their appearance assumes an intensity of grave import, as in the coma of acidosis complicating diabetes, the delirium of uremia in advanced nephritis, the cyanosis of carbondioxid poisoning in cardiac disease, etc., symptoms that are all due to the retention of catabolized substances,—proteins, nucleins, and carbohydrates. The great array of lesser manifestations due to the same and similar substances retained during the course of disease, should have the same recognition, and receive proper therapeutic attention.

The extent to which different individuals may be affected by these morbific agents varies greatly. It is obvious that the lymphatic type should suffer more than those of active temperament. Patients whose vocations require great physical activity become more toxic than those of sedendary employments. Those whose emunctory organs are already overworked are more easily affected when the demands are increased, as is the case of the pregnant woman, who must eliminate the catabolins of both herself and child. May not this account for the high mortality among those women who contract pneumonia after having been laden with the toxins of influenza?

Many eminent authorities believe that the nausea and vomiting of pregnancy are due to un-eliminated poisons, presumably of catabolic origin. In a recent article Talbot argues most convincingly that eclampsia is due to the same cause. He concludes that "The immediate cause of the symptoms of the disease (eclampsia) is the retention of the normal physiological waste products of the developing pregnancy."

While disease is the usual cause of catabolic toxemia other factors may produce the condition. The symptom of weariness is present when brain or muscle is overworked, and the debris of cell-destruction accumulates too rapidly for normal elimination. Rest reduces the rate of tissue-disintegration, and permits the emunctory processes to rid the body of the accumulated poisons. On the other hand, weariness results with continued inactivity of brain or muscle. The body fluids stagnate, and catabolins are retained. Here exercise stimulates the emunctory processes, and the toxic products are eliminated. In the same manner prolonged wakefulness disturbs nature's balance, while sleep is "nature's sweet restorer." The symptom of weariness is due to the retention of poisons, and may be independent of any morbid cause.

It may be difficult, and often impossible, to estimate the extent to which the toxemia due to the retention of catabolins may complicate any disease. Differential diagnosis must take into account the fact that the expression of toxemia

may be from other poisons absorbed or produced within the body. These may have the same composition, and hence the same expression in symptoms. This is especially true of bacterial toxins. This occurs only in bacterial infection, which may either complicate or be the cause of the disease. While a difficulty in diagnosis, this offers no handicap to treatment. The toxins of bacteria will be as readily destroyed by union with their appropriate antibodies, and treatment by serums and vaccines will be as effective, as though the bacterial toxemia existed alone. In estimating the degree of toxemia due to catabolins, ingested and re-absorbed poisons, or any toxic substance that finds its way into the blood-stream or any other tissue of the body, must be taken into consideration, for "the body is a receptacle of poisons, as well as a laboratory producing them." Disorders of the ductless glands, especially the thyroid, give rise to a chain of symptoms that require careful discrimination. Hidden foci of infection, intestinal stasis, malignancy, and every other possible cause of toxemia, require consideration. While the toxemia of catabolism seldom, if ever, admits of exclusion, its extent and severity must often be determined by excluding or estimating the extent of the toxemia due to other causes. On the other hand the diagnosis of any primary disease is incomplete until evidence of retained catabolins is looked for, and its relation to the effects of other poisons estimated.

Any rational consideration of the prophylaxis and treatment of the toxemia due to the retention of catabolins must necessarily take into account the causative pathology, which may be roughly classified as follows:

1. The production of catabolic poisons may follow the usual routine of retrograde chemical change as in health, and reach the usual routes of elimination as normal chemical substances, except that the rate of production exceeds the possibilities of normal elimination and the excess balance is retained.

2. The normal order of chemical changes may be interfered with, and result in the formation of substances that the emunctory organs cannot eliminate, that is, the substances may be of such a nature that they cannot reach the avenues of elimination.

3. The body fluids by which normal catabolic products are conveyed, may lose their normal chemical reaction, and be incapable of carrying these poisons in solution to the eliminative organs.

4. One or more of the eliminative organs may be incapable of normal function because of interference due to a pathological condition.

The causes of retention as above outlined suggest a rational prophylaxis and therapy: prophylaxis through the preservation of physiological balance and treatment directed toward (a) the reduction in the rate of tissue-destruction by proper treatment of the disease condition that has increased it; (b) the establishing of normal chemical changes by the regulation of physiological processes; (c) rendering the reaction of the body fluids normal by indicated corrections in diet or by the administration of acids or alkalies as required; and (d) securing normal activity of the emunctory organs by proper attention to existing pathology.

The plea presented is for the recognition of a toxemia due to the retention in the body of the poisonous catabolins of retrograde metamorphosis and for its proper consideration in the treatment of disease.

DISCUSSION

Dr. E. O. Giere (Watertown): Dr. Green's paper was very interesting, and it brings up some very interesting thoughts. Two years ago we might have made a diagnosis of such a condition as has been related by Dr. Green as auto-intoxication. Today we know that such a diagnosis goes only part way. The diagnosis behind this is the question at stake. What is it that causes toxemia or auto-intoxication? Lane, of course, says intestinal stasis. There are, undoubtedly, a good many cases in which it is, or may be, due to tonsillar infection. Maybe it is due to pyorrhea; maybe it is due to a stagnant condition of the gall-bladder secretion; maybe it is due to sinus trouble; maybe it is due to defective kidneys; and maybe it is due to constitutional disease, like diabetes, or to a constitutional disease generating its own toxins, like tuberculosis, and so on. But we know, for instance, we may get it where there is a faulty function of the organs of internal secretion, and, aside from this, we may get it in a mental condition, as, for instance, worry, sorrow, great anguish, and so on. The human system is a very complex one, and we must not forget that there are a good many different things that may produce this one thing that we call faulty metabolism or auto-intoxication.

Dr. H. J. G. Koobs (Scotland): Dr. Green makes a plea for the recognition of toxemia. I think that, as a rule, there is no trouble about determining that. We generally recognize that toxemia is present, but we are at a loss to know just what it is and how to combat it. Since toxemia is doubtless due to such chemical substances being present in the circulating medium of the body as should not be there, the question we ask ourselves is, What is that chemical substance which acts upon the nerve cells and produces these various symptoms we recognize as toxemia? The treatment will hinge on that point.

As to treatment: I will say that there are two ways of attacking this condition, and that is an effort should

be made to either neutralize these chemical products or to eliminate them aside from the removal of the creative factor. Usually, about the only means at our disposal is the process of elimination, for, unfortunately, we do not know as much about the chemistry of metabolism as we would like to know, and, therefore, we do not know what to use to neutralize the chemical substances that produce the intoxication. It ought to stimulate us to think about this subject more and to make an effort to become better versed in the chemistry of metabolism, so that we may know what the end-products of metabolism are, whether the result of degeneration, absorption of tissue, or whether the catabolic products are the result of bacterial invasion.

Dr. Green (closing): There seems to have been no objection raised to any statement I have made, although it appears from the discussion that my especial plea must not have been clearly set forth, in that toxemias, regardless of origin, seem to have been generally considered. The purpose of the paper is to call attention to that particular toxemia due to the retention of catabolins only,—those substances produced by retrograde metamorphosis. While not failing to recognize the intoxications due to poisons from other sources, especially bacterial, I have undertaken to call attention particularly to the morbid condition arising from catabolism, believing that it is too frequently overlooked in the differentiation of symptoms and that it has far too little attention in the treatment of the patient during the course of disease.

THE SPEECH MOVEMENT IN AMERICA

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If one may judge from various remarks and articles which have come to my attention, it appears that the speech movement, although it is already widely established and recommended, is in some quarters still unknown. In other places it is spoken of vaguely and without knowledge of details. It seems time, therefor, to indicate briefly the scope and extent of this movement. Those who are interested may receive reports, reprints, and summaries of papers read by becoming affiliated with the Society.

In 1912 there was founded in Boston a Speech Clinic in which instruction was given in the nature and cure of speech disorders. By and out of this parent Clinic, eleven others, three in Boston itself and eight in the country at large, have been founded. Authorized instruction is now given by six of these in medical schools and schools of education. The graduates of these Boston Clinics, about 250 in all, are now teaching throughout the United States, taking the methods they have learned into public and private schools, as well as into institutions for the mentally defective. Thus it is seen that the Boston Clinics have not only established centers for the study of speech problems, but they have produced and sent out instructors to man these institutions. This phase of their work has already received abundant recognition from educational authorities throughout the country. Seven cities have adopted, and are now using, the methods and systems of speech-correction taught in the Boston Clinics.

This movement has an organization known as the "National Society for the Study and Correction of Speech Disorder." The Society held its thirty-fifth meeting on November 4, 1918. Over two hundred papers, mostly dealing with scientific researches, have been read at its meetings, and about fifty of these have been published. The Society now numbers about two hundred and forty members,—a select but not an exclusive group. In former years the requirements for admission were somewhat lax, but they are rapidly growing more rigid. The advantage of membership is purely educational. It keeps the student in touch with recent developments in the science of speech, and gives him opportunity to read papers at set meetings.

A main effort in this movement has been, from the start, to study and to inaugurate methods looking to the *prevention* of speech-defects. It is matter of common knowledge that whatever has been done hitherto in the field of speech-correction has been in the nature, almost entirely, of attempted *cure*, uprooting already long existing faults. This has been what we may perhaps call "ambulance work." The National Society holds as its ideal a much more radical and thoroughgoing procedure than that, and feels

*Presented at the 35th meeting of the National Society for the Study and Correction of Speech Disorder, Cleveland, Ohio, November 4, 1918.

that in striking at once at the very sources of speech-disorders it is reading aright the lesson of all therapeutic history.

All who are working in the field of speech-correction feel the inadequacy of their training. It may at least be said that all should feel this, whether they do or not. The elocutionist feels that, although she can do good work in some parts of this immense field, she lacks the very desirable grounding in medicine and psychology which a wider education in speech matters should give. The teacher who has studied only phonetics is in the same predicament. The teacher of the deaf who is engaged in teaching lip-reading may do much, but she is limited in efficiency by ignorance of the organic causes of speech-disorder. The throat specialist often lacks knowledge of neurology, psychology, psychiatry, and psycho-analysis. The otologist may be as deficient as the laryngologist, and may be, in addition, ignorant of the external speech-mechanism. The neurologist and the psychologist each brings his own special equipment of knowledge and of ignorance. It would be unnecessary and merely invidious to mention these facts if it were not true that these are precisely the persons, with all their deficiencies, who are now pre-empting the field of speech-instruction. Adequate training for the vast and inclusive profession of speech-training is to be had, then, only in a place where an individual or several individuals have brought together all of the necessary branches of knowledge and skill. Now, it is precisely such a broad and inclusive training as this that is offered by the Boston Clinics. After study in one of these institutions one may safely assert that he has had, so far as it is to be obtained anywhere in America, the sort of training, both in extent and in specialization, which fits him for the rapidly increasing work in speech-correction throughout the land. The importance of this work is just beginning to be recognized. The future before it is a bright one. Those who begin their study now, and begin it under the right auspices, are to be the leaders of tomorrow.

This, then, is the scope, the purpose, and the record of the speech-training work emanating from Boston in the first six years of its history. It is solidly grounded; it has solid achievement already behind it, and an honorable, useful future before it. Like all innovations in educational method, it has had many difficulties, many misunderstandings, to face, but now it is being so widely recognized that ignorant criticism of its purpose and methods cannot any longer harm it or harm anyone so much as the criticizer himself.

MISCELLANY

ADVERTISEMENTS OF VENEREAL DISEASE REMEDIES FOR SELF ADMINISTRATION PROHIBITED

To prevent transmission, through the mails, of advertisements relating to the treatment of venereal diseases and certain sexual disorders.

Introduced in the Senate by Senator Townsend of Michigan, May 29, 1919, as S. F. 1139.

Introduced in the House by Representative Halvor Steenerson of Minnesota, June 6, 1919, as H. R. 5123.

BE IT ENACTED BY THE SENATE AND HOUSE OF REPRESENTATIVES OF THE UNITED STATES OF AMERICA IN CONGRESS ASSEMBLED.

That every book, pamphlet, picture, paper, letter, writing, print, or other publication containing advertisements which directly or indirectly represent or infer or call attention to a treatment or cure of syphilis, chancroid, gonorrhea, lost manhood, lost vitality, chronic discharges, gleet, varicocele, self-abuse, private diseases, or men's diseases, or to a medicine, article or preparation that may be used in the treament therefor, or to a person or persons from whom, or an office or place at which information, treatment, or advice relating to such diseases, infirmity, habit, or condition may be obtained, is hereby declared to be nonmailable matter and shall not be conveyed in the mails or delivered from any post office or by any letter carrier. Whoever shall knowingly deposit, or cause to be deposited for mailing or delivery, anything declared by this section to be nonmailable, or shall knowingly take, or cause the same to be taken, from the mails for the purpose of circulating or disposing thereof, or of aiding in the circulation or disposition thereof, shall be fined not more than $5,000, or imprisoned not more than five years, or both. Any person violating any provision of this section may be tried and punished either in the district in which the unlawful matter or publication was mailed, or to which it was carried by mail for delivery according to the direction thereon, or in which it was caused to be delivered by mail to the person to whom it was addressed.

Provided, that this section shall not apply to didactic or scientific treatises which do not advertise or call attention to any person or persons from whom, or any office or place at which information, treatment, or advice may be obtained, nor shall it apply to advertisements, notices, and publications issued by any departments of the United States Government or any department of a state or municipal government.

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STRIKES

The upheavals and strikes which are now in active progress are an evidence of the general unrest which apparently extends itself over the entire world. In Russia, for instance, Lenine, the present manager of the Russian state, frankly admits that the conditions there are not ordinary labor or domestic problems, but a deliberate state of revolution, and inflammatory revolution at that. And he believes that this condition will spread over the entire universe, and that it will not be long before a revolutionary party will overthrow all existing governments and establish a new order of government.

Of course, to the average man, this seems like the dream of a dreamer, who dreams that he is dreaming a dream. It seems highly improbable that any such state of revolution can extend to and involve the United States of America; for, although our people are gathered from all countries, the majority of them have a certain sense of the fitness of things, and a certain pride in self-government, which will prevent them from becoming either anarchistic or revolutionary.

The various upheavals which have occurred among the industries of the country, including the railroads and manufacturing interests, are sufficient to show that we have in this country a state of confusion as to what is right and what is wrong; and it reminds us of the antics of the mob and crowd which lead to overt acts, either by misunderstandings or by deliberate misrepresentations, or the primal effects of following a leader, particularly if he is not in the right. People are led away by their enthusiasms by the effect of violent speeches; by importunities of the so-called reformer, who is usually a dreamer, and sometimes a good one; and by example, as well as by the difficulties which arise from race problems.

The study of the psychology of the crowd is very interesting; but the problem is one that must be met with firmness and force, if necessary, on the part of the legal authorities who control the destinies of the country, and not by futile theoretical arguments. A recent instance is cited where a judge in Chicago instructed the jury that mob rule must be stamped out, and that, if necessary, the inciters of riots should be publicly hanged. Such a course is probably necessary under some circumstances; whether it will ever be carried out or not is questionable.

Just now the labor element is creating a good deal of difficulty, evidently projected without much analysis of the situation of the people as a whole, but limited to individual or corporation interests, in which the laborer attempts to override the majority of the people.

It is safe to say that this country is not going to be carried off its feet as the countries of Europe have been. Who could possibly conceive of a revolution, or a riot with a suspension of all activities, including not only the industries but the professional classes? How long would our Government stand for a strike among physicians, surgeons, and nurses that would tie up hospitals, infirmaries, and state institutions? It would be an appalling condition, unless perhaps it would advance the cults outside of medicine that treat disease without regard to diagnosis or scientific understanding—and then be even more appalling in the end.

Strikes seem to involve a special form of labor, and the professional man is wholly unlikely to be included in a strike situation, although in Germany, we are told, all of the professional men went on a strike. Naturally, a strike by physicians would be short-timed because the tying up and lack of care of the sick would be quite a different problem, in the minds of some, from one affecting the industries. And yet, when one considers it calmly, why should this country, or any other country, be burdened with the strikes in certain industries and necessities which mean suffering for the people? Is it because the Government is unable to cope with the situation? is it due to the fact that labor feels that it has millions of votes to throw one way or the other? or

is it simply a phase in the psychology of certain unstable, excitable, and irresponsible persons? Nothing seems to satisfy certain strikers. They demand things beyond the possibility of attainment, and act utterly regardless of the conditions of their fellow-men.

How much may be ascribed to political situations? Are the politicians of today, the men who are in congress and in the legislatures, afraid to open the question and have it discussed from a rational point of view, or are they simply afraid that, if they attempt to investigate strike conditions, they will lose votes thereby? It hardly seems possible that only a white-livered politician would indulge in this dream of influence. A strong political man with a logical, scientific, and investigating mind would not consider his own interests very long, but he would consider the interests of his constituents as a whole.

These upheavals and reforms are necessary, perhaps, just as a dose of calomel for the individual is necessary, occasionally, to clean the body politic; and it may be that out of it we get something that is eventually stable and satisfying. We know that out of many of the reform movements of past centuries much good has come, although accompanied by tremendous suffering; therefore, perhaps, after all, these upheavals are only a state of the public mind,—disordered, and unable to comprehend and cope with a practical situation. We have but few leaders, unfortunately, and they do not seem to grasp the helm very firmly.

It is impossible, of course, to know what the outcome will be in the future. It looks on the surface as if every man were out for himself. It seems certain that the leader of the rioting class is simply tickling his ego; and many of the other disturbing elements who go about the country and create factions and disordered views are men who should have been deprived of their ancestry, or, if they were fortunate enough to have a good ancestry, they must have been ill-trained and ill-mannered,—probably because they were ill-treated and under-nourished in younger life.

HOOKWORM INFECTION

The Rockefeller Foundation in its pamphlet, called "The Review for 1918," on public health in many lands, includes an effort to control or prevent hookworm infections; and the surveys which have been made extend over distant countries, including twelve states in the United States and twenty-one foreign states and countries.

Hookworm infection is found, not only in the areas in the southern part of our own country, but in the countries of Brazil, Jamaica, and Guam. New work was also taken up in Queensland, Australia, and in the Madras government of India in this investigation.

As a result of the demonstrations of the Board, many countries have inaugurated measures for the control of hookworm infection. In Ceylon, in Siam, and in Java the survey disclosed the prevalence of the disease; and they found that on the island of Guam there was an infection of 71 per cent, but, fortunately, of a mild type. The same control measures are carried on in some parts of China, in which the Rockefeller Foundation has shown great interest and is establishing a large medical school, as well as hospitals and schools, that will be equal in every way to any of the hospitals and schools in any other country.

The usual method of procedure in the control of hookworm infection is as follows:

1. An infection survey to determine the prevalence of the disease.
2. An intensive demonstration of treatment to cure the victims of the malady.
3. A campaign of public education as to the nature, control, and prevention of hookworm disease.
4. A persistent effort to secure the provision of proper sanitary facilities and regulations by which the pollution of the soil and the reinfection of the population can be avoided.

It is said by some people that China is a great graveyard on account of the tremendous number of deaths and the efforts of the natives to honor and revere the soil of their dead. The working classes of China, who earn a few cents a day, will spend, if they possibly can get it, a hundred dollars on a funeral rather than allow their dead to be cremated or properly buried without filial respect for the dead. Consequently, it is assumed that China has a soil polluted to such a degree that scientific sanitary measures cannot be employed to eradicate the pollution.

The relief of hookworm infection is not very difficult. In our own country the prevention of dirt-eating is one of the important factors in the control of the hookworm infection. Then, too, the proper selection and preparation of foods, cooked in such a manner that the infection cannot persist, the clearing out of the intestinal tract, and the introduction of such mild things as chenopodium and the use of thymol, are about all that is needed to relieve the sufferer.

If one were inclined to be at all facetious on the subject of hookworm infection, as evidenced

by laziness, sleepiness, indifference, and inability to work, one might extend the possibilities of hookworm infection to the large cities of the Northwest,—in fact, evidences of conditions similar to those found in hookworm disease are extremely numerous in various parts of the country. And perhaps, if many of our so-called lazy, worthless people were investigated, they might either demonstrate a typical hookworm infection or a form of mental hookworm disorder.

REFUGEE WORK IN FRANCE.

There has been more or less discussion about the work done by the American medical men in France and other European countries, and it is very difficult to arrive at a clear understanding of the results accomplished. Consequently, it was with a great deal of interest that the editor attended a meeting at the residence of Mr. Cordenio A. Severance at Cottage Grove, Minn., on Sunday last, when some of the workers from France told of their experiences.

Dr. Walter Ramsey, of St. Paul, described the work in which he took part, and emphasized the fact that the Americans were co-operating with the French, not assuming to take over the work which France holds, but simply to work with the French in their endeavor to take care of the sick among the refugees, particularly among children and women. Dr. Ramsey very thoughtfully considered the proposition, and decided that, after he had planned out a campaign, his personnel should consist entirely of French workers, and in doing this he gained their confidence and was able to render them greater assistance. He succeeded in establishing the idea of the foundation of hospitals, dispensaries, and social service centers, particularly the latter; and this plan has spread over the various parts of France where such work was most needed. He found the French people very ready to assist in and to follow anything that would promise results. After his work was properly organized, and he had established a training-school for social workers, nurses, and helpers, the French Government promptly took the work over, and used the newly trained associates to carry on the work which was already well started.

Dr. Ramsey was particularly modest in his statements of what he had accomplished, but he left a lasting impression on the French people. And he said he had accomplished as much there in one year as had been accomplished in St. Paul in ten years. This illustrates the possibilities of co-operation when carried on under intensive methods.

One must not forget, however, that Dr. J. P. Sedgwick went over to France very early in the war and established, in certain parts of France, a similar system. It is gratifying to know that the people of the provinces where Dr. Sedgwick worked have held him in great esteem. When the time comes to write up the medical aspects of the war sick-problems the names of Drs. Ramsey and Sedgwick of St. Paul and Minneapolis, respectively, will be at the top of the list.

Many other workers among the medical men went to Europe, notably Dr. Marcley, of Minneapolis, who gave up a year or more of work to assist in the prevention of tuberculosis. He realized very early in his experience that co-operation with the French was the proper method. Incidentally, he has remarked that, when it comes to the understanding of the tuberculosis situation, France was, and has been, amply prepared, and had the fullest knowledge of the latest methods for the prevention of tuberculosis. They needed, however, the assistance given them by the American physicians in instituting regular and systematic methods in medicine, and in the care of the refugees. And it is perhaps no more than fair to say that the Americans were the ones who formulated the regular institutional ideas.

Mr. John Kendrick Bangs and his wife were also speakers at the home of Mr. Severance, Mr. Bangs spoke very feelingly on the spirit of France, and drew three pictures of the attitude of the men of France toward the war and toward their country.

In the first picture, he cited the instance of three men coming up one of the avenues of Paris the morning of his arrival. They were jolly, joking and gesticulating, and bedecked with ribbons of honor. When he came nearer he found that between the three men there was a shortage of legs and arms,—and yet they exemplified what he endeavored to impress upon us as the real spirit of France.

The second picture was that of a tall, stalwart man with the bearing of a military man in good training, accompanied by his wife and children,—all happy; and yet, on closer inspection, he noticed the man had been deprived of both arms.

His third picture was a description of his visit to Belleau Wood, where he found the troops utterly exhausted after days of tremendous fighting. They lay upon the ground in all attitudes, getting what sleep they could before doing more. He found the band, composed of about forty

men, in the same exhausted condition, and as he distributed his cigarettes among them they expressed their appreciation; the leader immediately rose to his feet, and with his baton summoned the band to attention, and, although they had been tuning up their instruments, they arose to the occasion and Mr. Bangs was greeted with the Star-Spangled Banner. The devastated regions were then gone over, and in his talk Mr. Banks said it was impossible for any man, however skilled in words and phrases, to describe what he saw. He incidentally suggested that the President, who had visited the devastated areas of France, found the conditions indescribable.

Mr. Banks visited France in 1918 and again in 1919, and he thought, between the two years, that the year of 1919, the so-called peace period, was more tragic and pathetic than the war period of the year before.

Mrs. Bangs spoke of the work among her women associates, and how they were in villages which were devastated, evacuated, reoccupied, and again evacuated; and how everything was moved out in a very orderly fashion, showing again that the spirit of the people and their love for their homes, although desolated in the extreme, were a further evidence of the necessity of America still continuing to assist France in every department pertaining to their relief.

HOW OLD ARE YOU?

An insurance company has recently published a little card which analyzes the average man at different periods of life, and it furnishes some very interesting comments for thought. Incidentally, it is in line with our editorial of two weeks ago, on the causes of poverty.

The card shows a hundred average men, at the age of twenty-five, healthy and vigorous in mind and body and dependent upon their own exertions for their support.

At the age of thirty-five, five have died; ten have become wealthy; ten are in good circumstances; forty are in moderate circumstances; and thirty-five have not improved their condition.

At the age of forty-five, eleven more have died, sixteen in all; four only are wealthy, all the others, rated at the age of thirty-five as having resources, have lost their accumulations; sixty-five are still working and are self-supporting, but without other resources; fifteen are no longer self-supporting, owing to illness, accident, etc.; and a few still earn something, but not enough for self-support.

At the age of fifty-five, four more have died, twenty in all; one has become very rich; three are quoted in good circumstances, but they are not the same three quoted at age of forty-five, for one who is quoted as wealthy at forty-five has lost everything, and another not among the wealthy at forty-five has taken his place; forty-six are still working for their living, and are without any accumulation; and thirty are now more or less dependent upon their children and relations, or upon charity, for support, and some still able to do light work are being replaced by younger men.

At the age of sixty-five, sixteen more have died, making thirty-six dead out of a hundred; one is still rich; three are wealthy, one of those who lost everything before forty-five having again become wealthy; six are still at work and self-supporting; and fifty-four are dependent upon their children, relations, or charity.

At the age of seventy-five, twenty-seven more have died, making sixty-three in all, sixty of whom left no estate; two only are wealthy; three are rated as wealthy at sixty-five having lost their accumulations; thirty-five are dependents. These old men will die off rapidly, but their financial condition will not improve, and thirty-three of them will not have sufficient means to defray funeral expenses. The remedy apparently lies in being insured, and the best form of insurance for the young man who has every prospect of living to his expectancy is, clearly, endowment insurance. True, it costs him more than the ordinary life insurance; but, if he lives, it pays him more because it comes back to him. And by the time he gets it he is either a wise man or a fool. If he is a fool he will not know how to invest his money, but if he has worked hard to pay his endowment premiums he certainly will appreciate the accumulation, and probably is the wise man who will invest carefully, after advising with his banker. At all events, even if he has insurance of the ordinary stock type, he is providing for his family against an emergency, and he is leaving something which usually is wisely employed or invested.

There is another side to the situation which the recent war has brought out. It has been shown that one-third to one-half of the men examined have been deficient in one way or another. Their deficiency, however, is largely due to early training, badly devised. The fact of the matter, is, that the boy or the young man has had little or no physical training sufficiently wide in its scope to keep him in good health. But, if he had been brought up right in childhood, nourished properly, and taught the ordinary rudi-

ments which are fundamental to his education, he would be a stable and well man at almost any age, barring, of course, accidents and acute infectious disorders that are not preventable. His training, aside from the physical training which he ought to have, should be developed on the mental side, and he should be taught to prepare for conditions which are usually inevitable and which he must meet with a thinking mind. And when he does so, it makes but little difference how old he is. If he uses ordinary judgment in his daily life, in the regulation of his hours of work, and in the selection of proper food and sufficient exercise, as well as diversions of various sorts, he can still defy the insurance man,—or at least he can continue to contribute to the support of the insurance corporation.

It is rather unfortunate that so many people in middle life are still working, but have no accumulation behind them. Unavoidable circumstances may account for it, but usually it is personal circumstances which finally put them in the non-accumulative class. The man who reaches the age of forty-five, and has no other resources than what is gained by his daily occupation, has either been badly advised or he lacks the sacrificing spirit that prompts one to save. The larger number, however, are those who are dependant, and they are a sorry lot. They regret their past indiscretions and failure to organize their affairs or to look ahead, and they bring an insufferable burden upon their families. Those of us in the medical profession who go into all types of homes not uncommonly see these dependents, and we realize that many of them could have been more comfortably situated, and less troublesome to their relations and friends, had they had a little more incentive in earlier life.

It seems rather remarkable that 87 per cent of all estates left in the United States consist solely of life insurance. The moral seems to be to train the child in early life, physically and mentally, to instill in him habits which are lasting and helpful, and to advise him in the accumulation of money for his future existence. The end of life is a very unhappy one if you have to spend it with your relatives or friends, or become dependent upon charitable organizations.

NEWS ITEMS

Dr. W. J. Stock has moved from Waconia to Hastings.

Dr. V. S. Irvine has moved from Bantry, N. D., to Lankin, N. D.

Dr. M. C. Sorenson has moved from Highmore, S. D., to Blunt, S. D.

Dr. Wilson Lancaster, of Powers Lake, N. D., has moved to Sherwood, N. D.

Dr. C. Wicklund has moved from Powers Lake, N. D., to Melrose, N. D.

Dr. Alvin Lee, of Howard Lake, is home from France, and has resumed practice.

Dr. J. S. Abbott, of St. Paul, is home from France, where he had a long and eventful service.

Dr. Frederick W. Schlutz, of Minneapolis, has returned from army service and resumed his practice.

Dr. E. M. Morehouse has been released from army service, and has resumed practice in Yankton, S. D.

The National Association of Chiropodists held its eighth annual meeting in Minneapolis the first of this month.

The Minnesota State Medical Association will hold its annual meeting in Minneapolis on October 1, 2, and 3.

Dr. P. T. Trowbridge, of Washburn, Wis., has just returned from army service, and will locate in Hayward, Wis.

Dr. A. G. Noble has moved from Howard, S. D., to Brookings, S. D., and has offices in the Williams Block in that city.

Dr. E. V. Moore, of Butte, Mont., has resumed practice after two years' army service, most of the time being spent in France.

Dr. W. F. Maertz, of New Prague, is home from France, where the last year of his service in the Medical Corps was spent.

A very large addition is to be made to St Mary Hospital building at Rochester, increasing the capacity of the hospital by 300 beds.

The Cuenca Tuberculosis Sanatorium, Ramsey County's institution at Lake Owasso, will not be maintained next year, and may be abandoned entirely.

Dr. F. R. Walters, of Moose Lake, who lost his hospital in the recent forest fires, may locate at

Hutchinson, but is hesitating to see if that city is to have a hospital.

Dr. H. J. Thornby is doing postgraduate work in the East. Upon his return he will become associated with Dr. V. E. Verne, of Brainerd.

Drs. J. F. Hanna and Murdock MacGregor, of Fargo, N. D., have formed a partnership. Dr. Hanna recently returned from army service, with the rank of captain.

Dr. Frederick L. Adair, of Minneapolis, is home after a year spent in Red Cross work in France. Dr. Adair spent six months in children's work in Paris.

Beresford, N. D., is planning to build a hospital to cost about $60,000. Enough subscriptions have been obtained to guarantee the success of the undertaking.

An international conference of women physicians will be held in New York beginning September 15. Social workers of the Y. W. C. A. will join in the conference.

The physicians and citizens of Lemmon, S. D., have formed a corporation to build a hospital, which will be in charge of the Catholic sisters. The building will cost about $75,000.

Dr. J. W. Bowen, of Dickinson, N. D., had a narrow escape from death last month. He was in an automobile accident, in which Dr. E. F. Robinson, who was riding with him, was killed.

Dr. A. M. Fisher, of Bismarck, N. D., has not moved to Montana, but is only temporarily at Fort Keogh, in the line of his army duty in the Medical Corps, being post surgeon at that point.

Dr. Robert Oleson, an assistant surgeon to Surgeon-General Robert Blue, has been assigned to co-operate with the Wisconsin health authorities to obtain better reporting of diseases in that state.

The Federal Board for Vocational Training of District No. 10, Minneapolis, is seeking work for disabled soldiers. If any of our readers can use such help, a letter should be sent to the board at once.

The Northern Pacific Railway has begun the construction of a hospital building in St. Paul to cost $500,000 and with a capacity of 150 patients. The Brainerd N. P. Hospital will not be abandoned.

Another malpractice suit has fallen by the way after reaching the supreme court of Minnesota without a semblance of merit. It was a suit against Drs. R. C. Farrish and W. C. Portman, of Sherburn.

Dr. G. A. Holm, a State University graduate, class of '15, who is just back from France, will locate in Minneapolis. Dr. Holm was associated with Dr. Tuohy, of Duluth, before entering the Medical Corps.

The movement for the care of consumptives on the Mesaba range is prospering. Probably three or four receiving hospitals will be erected. Hibbing, Virginia, and Ely will probably have such hospitals.

The rank of commander has been conferred upon Drs. C. E. Henry and C. C. Tyrrell, of Minneapolis, who served as surgeons, with the rank of lieutenant commanders, on the ship Solace during the war.

The cities of Bismarck, Jamestown, Valley City, Mandan, and Dickinson (all in North Dakota) talk of uniting to employ a health officer for the five cities—a man who would give his whole time to the work.

Dr. J. G. Saam, city physician for Eveleth, reports that the baby clinics held in that town largely reduced summer illness among children. The clinics were conducted under the auspices of all the physicians in the city.

A news item says that when Dr. G. A. Cristman returned from army service to Cumberland, Wis., his rival practitioner in Cumberland, Dr. G. A. Grinde, sent him a check for $400 on account of fees collected from the former's patients. May Dr. Grinde's tribe increase!

The Federal Board for Vocational Education, with headquarters in Minneapolis, has made provision for giving a young physician who lost a leg in Germany a special education in eye, ear, nose, and throat work because of his inability to carry on a general practice.

Dr. H. W. Hill, of the Minnesota Public Health Association, is getting a lot of undesirable publicity out of a proposal made by an obscure St. Paul physician to adopt a steady diet of germs, any old kind that Dr. Hill can furnish, to prove that they are wholesome eating.

Dr. D. Edmond Smith, of Minneapolis, has returned from Red Cross work in France. He was located at Lourdes, and had charge of the refugees from Belgium and Northern France. It is reported that the governments of France and Belgium have bestowed high-honor medals upon Dr. Smith.

Dr. W. H. Hengstler, formerly of Osakis, who has recently returned from two years' army service in France, has become associated with Drs.

Riggs and Hammes, of St. Paul, specialists in nervous and mental diseases. Dr. Hengstler graduated from the University of Minnesota, class of '11.

Several nurses who have returned from abroad, where they have had valuable experience, are seeking positions in offices and institutions, in the city or in the country. Information concerning them may be obtained from the Minnesota State Registered Nurses Association, 879 Curtis Court, Minneapolis.

The demand for public health nurses is so great that the nursing course to be started at the University of Minnesota on September 1 should be made known by physicians to all women available for it. The country, especially, needs nurses, and the country should supply much of the raw material for making nurses.

Physicians wishing hotel accommodations during the meeting of the State Medical Association (October 1, 2, and 3) are requested to communicate with Dr. Hugh J. Tunstead, 1126 Metropolitan Bank Building, telephone Main 229, at the earliest possible moment, stating accommodations desired and hotel preference, if any.

The Southern District (N. D.) Medical Society held its annual meeting on August 1, in Oakes, when all officers were re-elected, as follows: President, Dr. C. C. Campbell, Ashby; vice-president, Dr. F. W. Maercklein, Oakes; secretary, Dr. J. F. Plane, Edgeley; member of Board of Censors, Dr. J. F. Brenkle, Kulm.

Dr. Egerton Crispin, of Los Angeles, Calif., who was formerly associated with the Mayo Clinic, has been made a commander in the Medical Reserve Corps of the Navy. Dr. Crispin was commissioned a lieutenant commander in June, 1917, and during over-seas service was in charge of the Medical Division of the Navy Base Hospital in Edinburgh.

The Elliot Memorial Hospital of the University of Minnesota will receive pay-patients hereafter at $14 per week for hospital care. The Regents, at a recent meeting, set aside 50 out of the 192 beds in the hospital for the use of such patients. When built the Memorial Hospital had but 108 beds, its capacity having been increased up to 192 beds by the State.

The health officers of Hibbing and surrounding towns have begun a campaign against the recurrence of the influenza epidemic. Pamphlets in several foreign languages will be distributed among the foreigners, and sanitary measures have been adopted and will be rigidly enforced.

Mitchell, S. D., has under consideration means of preventing another influenza epidemic.

Dr. Malcolm McKinnon, who practiced a good many years in Fosston and who recently moved to Sandpoint, Idaho, was killed last month in an auto accident, which occurred near Haines, Oregon. Dr. McKinnon was 52 years of age, and was a graduate of Trinity Medical College, and had been a student at McGill. He had practiced in Warren and Fosston in Minnesota.

Governor Frazier of North Dakota totally disregarded the physicians recommended by the State Medical Association for members of the State Board of Medical Examiners. He appointed the following: Dr. J. G. Arneberg, Grand Forks; Dr. W. G. Brown, Fargo; and Dr. S. A. Zimmerman, Valley City. Two of them are members of the State Association and one is not.

The new Clinic building at Sioux Falls, S. D., is well under way, and the plans of the architects, Messrs. Perkins and McWayne, of that city, show that it will be a handsome three-story structure to cost about $100,000. The Clinic is composed of Drs. R. G. and G. A. Stevens, E. L. Perkins, E. E. Gage, G. E. Vander Mark, N. J. Nessa, T. J. Billion, and M. A. Stern. The building will be completed by January 1.

The Minnesota medical men who attained the highest rank in the Medical Corps, that of lieutenant-colonel, as we recall them, are as follows: Drs. Warren H. Dennis, Charles Lyman Greene, and Jonas S. White (formerly in the regular army), of St. Paul; Drs. L. B. Baldwin, A. A. Law, H. E. Robertson, and L. G. Rowntree, of Minneapolis, (all of the University of Minnesota); and Dr. L. B. Wilson, of Rochester. The Drs. Mayo were colonels.

Dr. Charles Lyman Greene, of St. Paul, was recently mustered out of service and has resumed practice. Dr. Greene entered the service as a lieutenant, and rapidly advanced to the rank of lieutenant colonel. He spent several months in inspecting the army hospitals of the country for the Surgeon-General's Office, and he speaks in terms of the highest praise of the work done in all such hospitals. Dr. Greene has just returned from Seattle, where he was invited by the University of Washington to deliver a course of lectures on the heart and shell-shock before the medical men of the Northwest.

SURGICAL INSTRUMENTS, ETC., FOR SALE

A complete set of surgical instruments, a fine operating table, and an electric battery are offered for sale cheap. Address P. O. Box 23, Hazelton, N. D.

LOCUM TENENCY WANTED

A physician of experience who has been in war service and can give the best of references, desires temporary work as locum tenens. Licensed in Minnesota. Address 271, care of this office.

LOCUM TENENCY WANTED

A University of Minnesota senior desires work as locum tenens for the month of September. Has had three months' internship at University of Minnesota Hospital. Married; best of references. Address 269, care of this office.

ASSISTANT PHYSICIAN WANTED

Assistant physician for mining contract practice in Minnesota. Must be graduate of Class A college. Salary, $225 to start with. Early increase to the right man. Give full information in first letter, with photo. Address 270, care of this office.

LOCUM TENENS WANTED

General man to relieve member of firm for the months of August and September in Minnesota town of 3,000. Salary, $200 per month. Address 267, care of this office.

A 16-INCH "RADIOGRAPHIC SPECIAL" COIL FOR SALE

I have a 16-inch Radiographic Special coil for sale, which I offer at a low price. It is in perfect condition and is so guaranteed. Address or call upon Dr. E. O. Voyer, 212 Masonic Temple, Minneapolis.

PHYSICIAN WANTED AT ONCE

A good doctor is wanted to locate in a small Minnesota town, with the nearest doctor 20 miles away. Large surrounding territory. This is a splendid opening for a young man. Address Andrew W. Clay, Grygla, Minn.

APPARATUS FOR SALE CHEAP

On account of the death of Dr. Beil, I offer for sale at low price, the following: Static machine, galvanic, faradic, high frequency batteries and new *x*-ray tube and electric instruments—all in fine condition. Please make an offer. Mrs. A. Beil, Selby, S. D.

PRACTICE FOR SALE

Practice free to purchaser of modern office equipment; ground floor office, basement and furnace; southern Minnesota, no competition, large territory, fees the best, good roads; town 400, rich country. All conveniences, good drug store. Practice, $6,000 and upward, 98 per cent collectible. Address 266, care of this office.

POSITION AS LABORATORY TECHNICIAN WANTED

By a young woman, in a hospital or with a group of doctors, preferably in the Twin Cities. Routine laboratory work; experienced in tissue work; have assisted in making Wassermans; best of references. Address 254, care of this office.

MANAGEMENT OF SANITARIUM OR HOTEL WANTED

If you need a good man who is able to handle all the business, write me. Twelve years' experience. Open for position after October 1st. Good salary will be asked. Would be interested in opening new location with investment. Address 263, care of this office.

YOUNG PHYSICIAN WANTED

A long-established physician in a village of 1,000 population in Southern Minnesota wants a young man to assist him. Will pay a fair salary for first few months, followed by an equitable part of the income, with still better prospects if person is satisfactory. Address 258, care of this office.

HOSPITAL SUPERINTENDENCY WANTED

Wanted, a position as superintendent or assistant superintendent or manager of a hospital by a Hospital and Religious Work Secretary of the Army Y. M. C. A., who has been a year and a half in "Y" work at one of the larger general hospitals of the army. Is a college graduate and teacher, and otherwise well qualified. Knows how to handle people tactfully, and has the best of references. Address 273, care of this office.

SURGICAL PRACTICE FOR SALE

A physician and surgeon who has a good practice in a North Dakota town wishes to secure a good man to take his practice, which has consisted mostly of surgery, but also some country work. Books show collections of over $9,000 cash last year. Am changing location for a better opportunity to practice surgery, but wish to leave a good man in my place. Would like to dispose of some things, but not at an unreasonable price. I will gladly furnish any further information requested. Address 265, care of this office.

DOCTOR WANTED

Splendid opportunity offered to up-to-date physician and surgeon with $2,000 to $10,000. Community will invest balance of $20,000 to take over local hospital and equipment. Association incorporated under Minnesota state laws. Practice of former physician averaged $500 cash monthly for five years. No physician here at present time. A very rich farming community and a well known summer resort. Neighboring physicians will support hospital. Applicants must give references. Address Community Hospital Association, South Haven, Minn.

PUBLISHER'S DEPARTMENT

SPASMODIC SUMMER COMPLAINT

At this season when intestinal troubles are so prevalent, accompanied by the usual manifestation, abdominal cramps, etc., nothing seems to relieve this distressing condition so promptly as Hayden's Viburnum Compound, a true and safe anti-spasmodic. Dose: Mix two teaspoonfuls in seven of boiling water, and drink as hot as possible. Repeat every half hour until relief is obtained. Be sure the genuine H. V. C. only is administered.

THE OTTAWA TUBERCULOSIS COLONY

Down at Peoria, Illinois, is an institution for the treatment of the tuberculous where are found the highest medical skill; the best possible surroundings, as regard living quarters and environment; and a climate to which one from any section of the country may safely go at any time of the year.

Dr. J. W. Pettit, the Medical Director of the Colony, is a writer whose work is known both in the United States and Europe.

The illustrated book of the Colony is sent free upon application, and is a mine of information on the subject of tuberculosis.

GLIX—A BEVERAGE

The Gluek Brewing Co., of Minneapolis, is putting upon the market a new beverage, which it calls Glix. The company brings to its manufacture the accumulated experience of many years, a high-grade plant of large capacity, and a knowledge of what is possible in the manufacture of a beverage containing less than one-half per cent of alcohol.

We believe no better beverage of this kind can be made, and we further believe a brewed beverage with a proper hop and a slight alcohol content, can be made to take the place, in health qualities and in the matter of taste, of any beverage hitherto on the market.

THE METROPOLITAN MILK COMPANY

A number of years ago the Hennepin County Medical Society took hold of the milk supply of Minneapolis, and there was something doing—and done. The Milk Committee of the society never ceased its vigilance, and the splendid supply and almost perfect safety of the city is largely due to our physicians. It is also, in no small degree, due to the Metropolitan Milk Company, our largest milk distributer, which co-operated with the Milk Safety Committee.

It is, indeed, highly creditable to these commercial distributors that they were willing to incur the large expense necessary to bring about such results. Their skill, foresight, and willingness to do the right and the best thing in handling this great problem are worthy of all praise.

THE QUAKER OATS COMPANY

The Quaker Oats Company has put upon the table—mainly the breakfast table—of the American people four of the most wholesome food products given us by nature, and has put these products in a form that makes them far more palatable and nutritious than they ever were before. These products are refined oats, puffed wheat, puffed corn, and corn puffs.

The above products are good for children and adults, often for the sick, and always for the convalescent; and they are sold at prices beyond criticism in their reasonableness.

It is a pleasure to commend a great corporation doing such a work in a spirit of fairness to the public, making the product high and uniform and the price not at all exorbitant.

ASBURY HOSPITAL, MINNEAPOLIS

When a hospital adopts such a motto as that of the Asbury Hospital of Minneapolis—"Not to be ministered unto, but to minister"—it must either live up to its theory of life and of the proper mode of conducting a hospital or be "laughed out of court." For 27 years Asbury Hospital has worked under that banner, and it is today respected by all who know the institution, its directors and the personnel of its entire staff.

We have profound admiration for the work of the group of men and women who manage this great institution and *minister,* in a real sense, unto the public.

The Superintendent, Mrs. S. H. Knight, answers all personal questions, oral or written, about the work of the Hospital, while others give out such general information as the public seeks.

DR. G. H. SHERMAN, DETROIT, MICH.

Dr. G. H. Sherman, of Detroit, Mich., has gained a high and well-recognized position by his investigations and writings and laboratory work in vaccines, and the physician who is not familiar with the Sherman vaccines is missing a great help in his almost daily routine. The Sherman vaccines especially have proven themselves helpful to the profession, and it has been found that Dr. Sherman makes no exaggerated claims for his products, even though he is very enthusiastic over the same. Both he and his work are dependable; and it is worth while to be familiar with both.

Dr. Sherman will give anyone applying to him for information along his line of work the most careful attention, and will gladly answer any questions that may be asked him concerning things in this comparatively new field.

A PHYSICIAN'S EXCHANGE A NECESSITY

In many Eastern and in some Western cities, telephone exchange bureaus for doing certain parts of the work of an office girl or secretary, especially during the hours, both day and night, when the office assistant is not on service, have long been recognized as a necessity to medical men. The Twin Cities have such a bureau, known as the Physician' Exchange, which is ably conducted, but whose merits have not been fully recognized, and its real value to a physician cannot be stated in a few lines or learned by even a few weeks' trial of its service. Its work covers so many lines that to designate here and there one line is unfair to it.

In a general way, however, we can say it does for a physician the work of a high grade secretary during all hours of the day and night, when the secretary is not on duty, and the charge for the service is a couple of dollars a month.

The physicians of the Twin Cities should support the Physicians' Exchange located at Midway during the hard year or two through which it is now going, because of high prices.

THE HUDSON SANATORIUM

The Hudson Sanatorium is probably well known to all of the medical men of the older generation, and should be to all the physicians of the younger set in the Northwest. It was started by an able man, and has been uniformly in the hands of able men. For a long time now, it has been under the management of Dr. E. B. Bradford, an able physician and a highly capable executive, and has been conducted by him in an unusually successful manner.

Its location in Hudson, Wis., an hour's ride from the Twin Cities, is ideal. Its buildings and grounds improve from year to year, and its accumulated experience puts it near the front of a comparatively small group of high-grade sanatoriums in the West. Its equipment is modern and its management first class. It takes mental and nervous cases, and drug addicts, as well as patients in need of a quiet, home-like sanatorium treatment.

THE RELIEF OF FUNCTIONAL DEPRESSION

The conditions under which the majority of people have lived during the past few years have led to widespread nervous depression and debility. Overwork, worry, and restricted or changed diets have all tended to cause derangement of bodily functions. To correct and overcome these conditions of general weakness and debility, vigorous tonic treatment is invariably needed, and for this purpose there is no remedy that will be found more promptly and uniformly effective than Gray's Glycerine Tonic Comp.

Under its systematic use, combined with good food and hygienic care, the digestion is improved, the nutrition is aided and promoted, and the vitality of the whole body raised substantially. The nervous and mental condition of these weakened and debilitated patients shows a gratifying improvement in every way, and in what is often a surprisingly short time they regain their strength and vitality, with complete relief from their systemic depression and loss of bodily energy.

The use of Gray's Tonic Comp., together with painstaking regulation of the hygiene and diet, has undoubtedly saved many of these cases of nervous depression from developing into graver ills.

THE CHICAGO LABORATORY OF SURGICAL TECHNIQUE

A great surgeon is a man who is well-nigh perfect in his technique and well-nigh infallible in his surgical judgment. Surgical judgment is the product of study and experience; surgical technique is the product of instruction and experience. The former, at least in a high degree, is never attained by some men, and yet they will become fairly successful surgeons; the latter can be obtained by most surgeons, and without it, in a fair degree of perfection, no man should use a surgical knife.

It was a happy thought that led to the establishment of the Laboratory of Surgical Technique by a group of Chicago surgeons; and its method of work—individual instruction at the operating-table where the student is the operator—will never fail to do one of two things: give the student (a new surgeon or an old one) the basis of a perfect technique, or an order to quit surgery. There are indeed few men who cannot acquire a very high-grade technique under such instruction, guidance, and practice as are obtainable in this laboratory; and the man in need of this technique wrongs himself and the public when he turns his back upon it.

The notice of the Laboratory on another page gives further details of its work.

THE
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Minnesota, North Dakota, South Dakota, and Montana
The Official Journal of the
North Dakota and South Dakota State Medical Associations

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TRANSACTIONS OF THE NORTH DAKOTA STATE MEDICAL ASSOCIATION, THIRTY-SECOND ANNUAL MEETING, 1919

OFFICERS AND COMMITTEES

PRESIDENT
W. P. BALDWIN, M. D.....Casselton

PRESIDENT-ELECT
FRED EWING, M. D.....Kenmare

FIRST VICE-PRESIDENT
H. E. FRENCH, M. D.....University

SECOND VICE-PRESIDENT
E. P. QUAIN, M. D.....Bismarck

SECRETARY
H. J. ROWE.....Lisbon

TREASURER
WILLIAM F. SIHLER, M. D.....Devils Lake

COUNCILOR—CASS AND RANSOM COUNTY SOCIETIES
PAUL H. BURTON, M. D.....Fargo

COUNCILOR—DEVILS LAKE DISTRICT SOCIETY
G. F. DREW, M. D.....Devils Lake

COUNCILOR—GRAND FORKS DISTRICT SOCIETY
J. E. COUNTRYMAN, M. D.....Grafton

COUNCILOR—NORTHWESTERN DISTRICT AND KOTANA SOCIETIES
E. M. RANSOM, M. D.....Minot

COUNCILOR—SHEYENNE VALLEY DISTRICT SOCIETY
F. L. WICKS, M. D.....Valley City

COUNCILOR—SIXTH DISTRICT SOCIETY
F. R. SMYTH, M. D.....Bismarck

COUNCILOR—SOUTHERN DISTRICT AND RICHLAND COUNTY SOCIETIES
L. B. GREENE, M. D.....Edgeley

COUNCILOR—STUTSMAN COUNTY SOCIETY
LEROY G. SMITH, M. D.....Medina

COUNCILOR—TRAIL-STEELE COUNTY SOCIETY
O. A. KNUDSON, M. D.....Buxton

COUNCILOR—TRI-COUNTY SOCIETY
CHAS. MacLACHLAN, M. D.....New Rockford

MEMBER OF THE HOUSE OF DELEGATES OF THE AMERICAN MEDICAL ASSOCIATION
E. A. PRAY, M. D.....Valley City

ALTERNATE
A. J. McCANNEL, M. D.....Minot

PROCEEDINGS OF THE HOUSE OF DELEGATES

FIRST SESSION—TUESDAY, JUNE 23D

The House of Delegates met at 8 P. M., June 23, 1919, in the Commercial Club rooms, Grand Forks, and was called to order by Dr. W. P. Baldwin, First Vice-President, who, in the absence of the President, presided.

There were present, Secretary H. J. Rowe; Councilors James Grassick and Charles MacLachlan, and Delegates John R. Rinlaub, W. C. Fawcett, G. M. Williamson, T. Mulligan, O. J. Fortun, and E. L. Goss. The acting President appointed Drs. Mulligan, MacLachlan, and Goss a committee on credentials who reported as follows:

Report of the Committee on Credentials

Mr. Chairman,—Your Committee on Credentials beg leave to report as follows: Upon examining the credentials presented it is found that the secretaries of many of the component societies are delinquent in the matter of furnishing their representatives with credentials required under the By-Laws. We, however, find that the following are the Councilors and Delegates from the respective societies, who are entitled to seats in the House of Delegates:

Society	Councilor	Delegate
Devils Lake	W. D. Jones	W. C. Fawcett
Northwestern	E. M. Ransom	A. Carr
Sheyenne Valley	F. L. Wicks	R. D. Benson
Kotana	E. M. Ransom	M. E. Traynor
Richland	Paul Sorkness	Irving J. Cross
Sixth	F. R. Smyth	H. O. Altnow
Southwestern	F. R. Smyth	A. A. Whittemore
Southern	L. B. Greene	L. B. Greene
Stutsman	LeRoy G. Smith	P. G. Arzt
Traill and Steele	James Grassick	O. J. Fortun

Tri-County	C. MacLachlan	Altern't E. L. Goss
Grand Forks	J. E. Countryman	G. M. Williamson
		Thos. Mulligan
Cass	Paul Sorkness	J. H. Rindlaub
Sixth	F. R. Smyth	O. C. Maercklein

All of which is respectfully submitted.

Chairman Thos. Mulligan, M. D.
E. L. Goss, M. D.
C. MacLachlan, M. D., Sec'y.

The minutes of the last annual meeting were approved as printed, and their reading was dispensed with.

The Secretary submitted his annual report as follows:

The Secretary's Report

The scene has shifted. Last year we were engaged in a bloody struggle, and many of our physicians whose faces we were accustomed to see at our annual meetings were in uniform doing their bit. Today peace reigns in our borders, and, while many of the men that attended our annual gatherings are still employed in looking after the sick and wounded, a good many are with us today.

This is a history meeting, and we congratulate those who were so fortunate as to be a part of the great struggle for universal democracy, and we welcome them to our annual meeting.

It so happens that but one physician in the state failed to return,—Dr. Wm. L. Cowper of Michigan, the only commissioned doctor who died in the service.

The past year has been an unusually busy one for those physicians who remained at home. Never before have physicians worked as laboriously as they did during the epidemic of influenza, when people were sick by the scores and hundreds. The fatalities were not excessive, considering the great number who were ill, and the absence of nurses and attendants that were so sorely needed. No men ever worked such long hours and attended more faithfully to the multitude of sick that demanded the attention of medical men. Fortunately, there were but few fatalities among the physicians who remained at home and who, because of the scarcity of doctors, did an almost insurmountable lot of work at the loss of both strength and rest, and endured very great hardships. The old adage "that work does not kill as many as worry," was demonstrated during the recent epidemic, and, while men worked as never before, they came out of the conflict in good health and ruddier complexioned.

MEMBERSHIP

The membership has fallen off somewhat, the figures being lower than last year. This may be accounted for because the men left at home were so busily engaged in their professional work that they did not make as active a canvass for members as last year, when every physician was listed and reported as fit for military service, either in the Medical Reserve or in the volunteer Government service. Some local societies were so generous as to report all the available men in their districts, whether the men individually had paid their dues or not, the societies assuming the obligation and sending in the state per capita.

All component societies have made their annual reports, some being rather tardy, but since the annual meeting was scheduled to be held the latter part of the present month—a month later than usual—no serious inconvenience was occasioned by the delay.

THE CONTROL OF CANCER

The American Society for the Control of Cancer requests the co-operation of this State and desires as soon as possible the names and addresses of the members of the cancer committee of our state. With the return of peace the campaign for the dissemination of knowledge about cancer is being actively resumed, both among the laity and within the profession. A new circular on cancer for general distribution is soon to be issued by the United States Public Health Service, and can be obtained in quantities for distribution by addressing Dr. Charles F. Boldman, Chief of the Section on Public Health Education, U. S. Public Health Service, Washington, D. C.

THE JOURNAL-LANCET

The subscriptions to The Journal-Lancet have varied from 356, in January, 1918, to 402 in December, for which we have paid the publishers $392.77.

By a singular coincidence the variation in the cost has been but $2.86 in excess of what was paid the preceding year.

June 24, 1919.

Respectfully submitted,
H. J. Rowe, M. D., Secretary.

The report was accepted, and referred to the Committee on Officers' Reports consisting of Drs. G. M. Williamson, A. Carr, and J. H. Rinlaub.

The Treasurer read his annual report which was referred to the Auditing Committee.

Treasurer's Report

NORTH DAKOTA STATE MEDICAL ASSOCIATION

W. F. Sihler, Treasurer

Annual report for year from June 21, 1918, to June 23, 1919

RECEIPTS

Society	Amount
Cass County Medical Association	$215.00
Devils Lake District Medical Society	178.75
Grand Forks District Medical Society	255.00
Kotana Medical Society	34.00
Northwestern District Medical Society	350.00
Richland County Medical Society	70.00
Sheyenne Valley Medical Society	110.00
Sixth District Medical Society	245.00
Southern District Medical Society	90.00
Southwestern District Medical Society	55.00
Stark County Medical Society	65.00
Stutsman County Medical Society	100.00
Traill-Steele County Medical Society	55.00
Tri-County Medical Society	95.00
Total cash receipts for the year	$1,917.75

DISBURSEMENTS

6-25-18	P. S. Erickson	$2.25
6-25-18	A. W. Skelsey	142.50
7-15-18	Grand Forks Herald	12.75
7-15-18	Geo. Schnepper	105.00
7-15-18	Dr. H. E. French	1.12

9- 6-18	Journal-Lancet	192.17
9-30-18	Bismarck Tribune	10.00
9-30-18	F. R. Smyth	100.00
10- 7-18	Ramsey County National Bank (Liberty Bonds)	1,000.00
10- 8-18	H. J. Rowe, Secretary	100.00
10-19-18	C. D. Mills	3.00
12-13-18	Bosard & Twiford	300.00
3-17-19	Journal-Lancet	200.60
3-17-19	Dr. V. J. LaRose	52.50
4-18-19	H. J. Rowe, Secretary	100.00
6-23-19	H. J. Rowe, Secretary	230.00
Total		$2,551.89

NORTH DAKOTA STATE MEDICAL ASSOCIATION

FINANCIAL REPORT

June 21, 1918, to June 23, 1919

	Dr.	Cr.
June 21, 1918, balance on hand	$1,830.70	
Cash receipts for year	1,917.75	
Dec. 13, withdrawn from savings and placed in the general fund	300.00	
Expenses for the year		$2,551.89
Balance on hand		1,496.56
Totals	$4,048.45	$4,048.45

SAVINGS FUND

	Dr.	Cr.
June 30, 1918, balance in bank	$1,786.32	
Dec. 13, 1918, withdrawn and placed in general fund		$300.00
Dec. 31, 1918, interest	35.17	
June 23, 1919, balance in bank		1,521.49
June 30, 1919, accrued interest		30.43
Total		$1,851.92
Withdrawn		300.00
Total, savings fund		$1,551.92
General fund		1,496.56
Total amount in bank		$3,048.48

Liberty Bonds

Fourth Liberty Loan (2 coupon Bonds $500)	$1,000.00
Interest, coupons still attached	20.20
Total	$1,020.20
Total assets	$4,068.68

W. F. Sihler, M. D.,
Treasurer.

REPORTS OF COUNCILORS

Report of the Northwestern and Kotana District Medical Societies

Jan. 23, 1919.

Mr. President,—The Northwestern District Medical Society has the following report to submit:

Members in good standing during the past year, 76.

Members dropped for non-payment of dues, 5.

Physicians in service from the district, 18.

Members in service whose dues were paid by the society, 12, leaving six men in the service who were not members of the society.

Four meetings were held during the year, during which six papers were read and discussed. The average number in attendance was 18. Our Secretary tried to ascertain the number of men practising in the district during the year, but was unsuccessful in this. He consulted the various Registrars of Deeds in the district, knowing that every physician practicing in the district is required by law to have his license registered, and he found that a very small number of men were on record in these offices and many of them were men who had moved out of the district long ago. This brings to our minds quite forcibly the need for closer observance of the law requiring physicians to register their licenses.

The report of the Kotana District Society is as follows:

Members in good standing during the past year, 12.

Members dropped for non-payment of dues, 0.

Physicians in service from the district, 7.

Members in the service, 7.

Members in the service whose dues were paid by the society, 0.

Three meetings were held during the year, in which about twenty papers were read and discussed. The average number in attendance at the meetings was five. During the year the society adopted a new fee bill.

Respectfully submitted,
E. M. Ransom, M. D.
Councilor.

Report of the Sheyenne Valley Medical Society

Dr. E. A. Pray, Pres. N. D. State Medical Association.

Dear Doctor: The Sheyenne Valley Medical Society serves the physicians located in Barnes and Griggs Counties as a component society of the State Medical Association.

All meetings are held in Valley City. At our annual meeting held in February, clinical cases were discussed, as was the subject of trachoma. Following the election of officers the meeting was concluded by a banquet.

The officers of the society are as follows: President, Dr. S. Almklov; vice-president, Dr. C. E. Spicer; secretary-treasurer, Dr. S. A. Zimmerman; delegate, Dr. R. D. Benson.

Our territory, the counties of Barnes and Griggs, has an estimated population of thirty thousand, with twenty-four doctors, twenty-three of whom are at present in good standing in the society; last year our membership was twenty-six. We have a loss of three members, which loss is accounted for by the transfer of Dr. Platou to the Cass County Society, Dr. Nolte to the Stutsman County Society, and Dr. Hunt to the Grand Forks District Society.

No new man has located with us during the year.

We have no unlicensed practitioners; all of our men are regulars.

Seven of our membership were in the service,—Drs. Brimi, Hunt, Livingston, Platou, of Litchville; McDonald, of Fingal; Wanner and Westley; four of these saw service overseas.

During the absence of these doctors their dues have been paid by the society.

Many of our home men did valiant service as members of the local and advisory boards, and all were energetic in aiding the several and various projects for the successful prosecution of the war.

The epidemic of influenza was severe, and, in order to facilitate matters and to care better for those seriously sick, the municipality of Valley City opened an emerg-

ency hospital, and this institution cared for as many as fifty-six cases at one time.

I am happy, in conclusion, to state that there has been no death in our membership; that there is a spirit of harmony and co-operation within the fraternity; that some progress, I believe, has been made toward the proper appreciation and understanding between patient and physician, and that nothing has happened to lessen the profession in the estimation of the laity.

All of which is respectfully submitted.

F. L. Wicks, M. D.
Councilor.

Report of the Traill-Steele Medical Society

To the House of Delegates of the North Dakota Medical Association:

Gentlemen: As Councilor for Traill-Steele Society, I beg to report as follows:

Number physicians, members 10.

Number physicians, non-members, 2.

Number physicians in District, 12.

During the year there were two deaths: Dr. W. E. White, of Mayville; and Dr. Gabriel Nygaard, of Luverne.

Three members of the Society were in the M. R. C. as follows:

1. Dr. John G. Abbott, Fort Riley, now located at Los Angeles, California.

2. Dr. T. P. Martin, New York City, now located at Mayville, North Dakota.

3. Dr. A. J. Heimark, served in France, now practicing at Finley, North Dakota.

There have been three meetings in the year, all well attended. The present officers are:

President,—Dr. O. A. Knutson, Buxton.

Secretary,—Dr. Syver Vinje, Hillsboro.

Delegate,—Dr. O. J. Fortun, Mayville.

Respectfully submitted,

James Grassick, M. D.
Councilor.

Report of Committee on Revision of the Constitution

Dr. G. M. Williamson, who was chairman of a committee appointed by the President to revise or present a new constitution for the guidance of the Association, made an oral report, and in the absence of Dr. E. A. Pray, the President, it was decided that the report should be held in abeyance until the arrival of the President and to familiarize and learn the changes that were to be made; a committee consisting of Drs. John N. Rinlaub, A. Carr with G. M. Williamson was appointed to analyze and make additions, if required, prior to action being taken on the proposed constitution.

Report of the Committee on Medical History of North Dakota

To the House of Delegates of the North Dakota Medical Association, Grand Forks:

Gentlemen: At the last meeting of our Association, I had the honor of being appointed by your Honorable President as chairman of a committee to prepare a history of North Dakota medicine. On accepting the responsibilities of such a position, I was not unmindful of the difficulties involved and of the amount of time, labor, and money that would necessarily have to be spent, were anything of value to be accomplished. As you are doubtless aware, unfortunately, all of our official records as a Society were destroyed by fire some eight years ago, and our history, if such you would call it, exists only in the memory of those now living, together with such scattered records, in lay and professional publications, as are here and there obtainable. To rescue some of this fast-vanishing material from oblivion, and to make of it permanent records, has been our pleasant and, may we hope, profitable task. The accompanying manuscripts are submitted as an exhibit of what has been done. When we have to rely on oral evidence for our records, the work is especially difficult, for this kind of knowledge is fast slipping away and becoming scarcer and dimmer as the years go by. We cannot look back on many decades of the past, and yet in the brief space of time that has come within our ken, we have noticed the passing of much material that would have proved of intense interest and value in the future. When the custodian of knowledge neglects to record or transmit it when the memory is fresh and retentive, or dies with it in his bosom, it may suffer from truthfulness and detail on the one hand, or be entirely lost to the world on the other.

"Like the snowflake in the river,
A moment white, then gone forever."

It would seem, therefore, that an honest and earnest endeavor to collect and preserve the records of North Dakota medicine would not only be a duty we owe to ourselves, but a debt of gratitude to the memory of those devoted pioneers who braved the hardships and privations of the frontier, to minister to the relief of the early settlers.

In view, therefore, of the importance of the question, and of the necessity for immediate action, your committee would respectfully recommend:

1. That each component society be requested to appoint a historical committee, whose duty it shall be to collect and collaborate the historical data of their respective districts, and transmit it in proper form, to the Historical Committee of the State Medical Association.

2. That sufficient funds be furnished by the State Association to defray the necessary expenses of its Historical Committee in making transcripts and copies, and in collecting material of historical value to the Association.

James Grassick, M. D.
Chairman.

Report of the Committee on Public Health and Legislation

Dr. V. J. LaRose, Chairman, presented the following oral report which was accepted: The committee did what they could, but no effort on their part could stay the legislation proposed to legalize and give irregulars in this state greater latitude in treating diseases, and he believed it was useless to attempt to influence the legislature to pass laws that would be of benefit to the people of this state, but to let them go to it.

It was the opinion of the committee that until the public is educated and the people learn the necessity for better health laws, it would be unwise for the physicians to plead the cause for the public.

Adjourned until 11 A. M., June 24th.

SECOND SESSION—TUESDAY, JUNE 24TH

The meeting was called to order at 11:30 A. M. by the President, Dr. E. A. Pray, Valley City. There were present Drs. Grassick, Wicks, MacLachlan, Ransom, Carr, Smyth, J. H. Rindlaub, Fawcett, Williamson, Mulligan, Trainor, Benson, Whittemore, Greene, Fortun, and Goss.

The Secretary, Dr. H. J. Rowe, Casselton, called the roll.

Dr. Rowe read the minutes of the meeting of the House of Delegates held on June 23, 1919, which, upon motion, duly seconded, were accepted as read.

Dr. J. H. Rindlaub, Fargo, moved that the Council set aside a sum of money to assist in completing the history that Dr. Grassick was working on, and that the amount be placed at the discretion of the President. Seconded by Dr. Goss.

Dr. G. M. Williamson, Grand Forks, stated that, according to the old constitution the Association was supposed to be working under, all such things had to go through the Council. He had made a motion at the preceding meeting that the matter be referred to the Council, and as the President had recommended the same thing in his address it would come through that way. Dr. Rindlaub then withdrew his motion.

The Chair appointed the following:

Committee on President's Address: Dr. J. H. Rindlaub, Fargo; Dr. A. Carr, Minot; and Dr. G. M. Williamson, Grand Forks.

Auditing Committee: Dr. James Grassick, Grand Forks; Dr. F. L. Wicks, Valley City; and Dr. E. M. Ransom, Minot.

REPORTS OF COMMITTEES

Committee on By-Laws

Dr. G. M. Williamson stated that in going over the matter of preparing a constitution and by-laws he had written to the secretaries of the most prominent societies in this country, and had gotten copies of their constitutions and by-laws. He took from them what he thought was best and incorporated the different things into a constitution, which he hoped would be acceptable to this Association. He thought everything in connection with the working of the Association had been incorporated.

The night before they had unearthed a constitution which was made in 1894, which was not complete, but in most particulars was practically the same as the one he had at present. He and Drs. Carr and Grassick had compared the old one with this new one, and had found that there was little difference, except that he had added some things to the new one and enlarged it.

The President thought it would be well for the committee to point out the differences so that they would have something definite to work on.

Dr. Williamson said there were two or three things he wished to call attention to. For instance, the paragraph of the constitution concerning the election of Associate Members.

Section 3, Article IV.—Associate Members: Teachers in any regular medical school, resident in North Dakota, in no manner engaged in the practice of medicine, and not otherwise eligible to regular membership, may become Associate Members of this Society, when elected Associate Members of the component society of the county in which said teachers live. Such members shall be designated Associate Members; they shall enjoy the same privileges as regular members and shall be subject to the same conditions.

It had been thought that many men connected with the State University, and perhaps with other institutions of learning, would be valuable members of the Association.

Dr. A. Carr asked if the associate members were to be medical men.

Dr. Williamson stated that this was not necessary. Many men who are not medical men are good members of every society. Men who are connected with medical schools and the university, teachers of physiology and other things, would be available members.

Dr. Carr was in favor of having teachers who were graduates in medicine belong to the Association, but could not see his way clear to having men who were not medical graduates belong to the Association in any capacity.

Dr. Fortun said that, at the time he was connected with the Medical School, Dr. Braden was the Dean, and, while he was not a graduate in medicine, he would be a valuable man for the Association.

Dr. Ransom said it struck him that if a professor or teacher in a medical school should become an associate member of the Association he would then be entitled to become president, and it did not seem right to him that anyone but a physician should be president of the Association.

If associate members were taken in with the same privileges as active members they would be entitled to become president.

Dr. Williamson said there had been a slight change in the paragraph regarding the House of Delegates, and read the following:

Article V.—House of Delegates: The House of Delegates shall consist of (a) Delegates elected by the component societies; (b) the Councilors; and (c), ex officio, the president and secretary, president-elect, and vice-presidents of the society. It shall be the legislative body of this society, and shall conduct all business, except such as is otherwise provided for by the Constitution and By-Laws. All recommendations of the House of Delegates dealing with the acquisition or disposal of property of any kind, or with the appropriation or expenditure of funds in any way, must be approved by the Council. A majority of all the registered delegates shall constitute a quorum for the transaction of business.

Dr. Williamson stated that the only difference was that the vice-presidents and president-elect could take part in the meetings of the House of Delegates. This had been talked of very largely in the past, and several of the members had expressed it as their view that it should be so arranged.

He then read Article IX as follows:

Article IX.—Officers: Section 1. The officers of this Society shall be a President, a First Vice-President, a Second Vice-President, a President-Elect, a Secretary, a Treasurer, and — Councilors.

Section 2. The President-Elect, Vice-President, Secretary and Treasurer shall be elected annually by the House of Delegates, to serve for a term of one year. The Councilors shall be elected by the House of Delegates. Three of them shall be elected at first to serve for one year, three to serve for two years, and three to serve for three years. Thereafter three shall be elected annually to serve for three years. All officers shall serve until their successors are elected and installed.

Section 3. At the election of officers at the session of 1919 there shall be elected a President who shall enter upon the duties of his office at once, and also a President-Elect who shall assume the duties of President one year later. Thereafter the President-Elect shall assume the duties of the President on the last day of the Annual Meeting at 2 P. M., and shall continue in office until his successor has been elected and installed.

Dr. Williamson explained that this matter had been brought up at the previous meeting, and he had explained what he thought was the necessity of having a man elected as President-Elect. It gave the man an opportunity to prepare his address, to read it at the last session, get his committees appointed, and make his plans accordingly. Under the present plan there was no opportunity to do this. The plan of having a President-Elect was followed by the A. M. A. and many other societies, and had been recommended in the President's address last year.

The speaker stated that there was a slight difference in the section regarding the question of a referendum and read *Article XI, Referendum,* as follows:

At any general meeting the society may, by a two-thirds vote, order a general referendum upon any question pending before or passed by the House of Delegates, and the House of Delegates shall by a similar vote of its own members, or after a like vote of a general meeting, submit any such question to the membership of the society for a final vote. A majority of the members voting shall decide the question and be binding on the House of Delegates.

He also called attention to the section of the By-Laws relating to the election of officers, as follows:

Chapter V.—Election of Officers: Section 1. All elections shall be by ballot, and a majority of the votes cast shall be necessary to elect.

Section 2. On the first day of the annual session the President shall appoint a nominating committee of three.

Section 3. The report of the nominating committee and the election of officers shall be the first order of business of the House of Delegates, after the reading of the minutes, on the second day of the general session.

Section 4. Nothing in this article shall be construed to prevent additional nominations being made by the House of Delegates.

Dr. Williamson explained that this followed the same plan the Association had followed in the past. If any delegate brought in a report anyone could arise and nominate any man he saw fit. A regular ballot or a standing vote could be called for on any question.

He further explained that the By-Laws then took up the duties of the officers, the Council, and committees and that there was provision for some new committees, namely, a committee on scientific work and one on medical education, as follows:

Chapter VIII, Section 2. The Committee on Scientific Work shall consist of the President and Secretary and three members appointed by the President from the local society where the annual meeting is to be held. It shall determine the character and scope of the scientific proceedings of the Association, subject to the provisions or the instructions of the House of Delegates or of the Association, or to the provisions of the Constitution and By-Laws. Thirty days previous to each annual meeting it shall prepare and issue a program announcing the order in which papers, discussions and other business shall be presented, which shall be adhered to by the Association as nearly as practicable.

Section 5. The Committee on Medical Education shall consist of three members; one member shall be elected to serve for one, one for two, and one for three years; thereafter one member shall be elected each year to serve for three years. The function of this committee shall be (1) to co-operate with the State Examining Board in matters pertaining to medical education; (2) to

make an annual report to the House of Delegates on the existing conditions of medical education in the State; (3) to co-operate with the Council of Education of the American Medical Association in the effort to elevate the standard of medical education in the United States.

Dr. Williamson's idea was to have this committee report to the House of Delegates to find out how many men would be up for examination and where they were located, and report in detail. He felt that the Examining Board would welcome such a Committee, and that it would be useful to the State.

He then read the section of the By-Laws pertaining to assessments and expenditures, as follows:

Chapter IX.—Assessments and Expenditures: Section 1. The assessment of five dollars ($5.00) per capita on the membership of the component societies is hereby made the annual dues of this Association. The Secretary of each county society shall forward its assessment together with its roster of all officers and members, lists of delegates, and list of non-affiliated physicians of the county to the Secretary of this Association on the first day of March in each year.

Section 2. Any County Society which fails to pay its assessment, or make the report required on or before the first day of April in each year, shall be held as suspended, and none of its members, or delegates, shall be permitted to participate in any of the business or proceedings of the Association or of the House of Delegates until such requirements have been met.

Section 3. All motions or resolutions appropriating money shall specify a definite amount, or so much thereof as may be necessary for the purpose indicated, and must be approved by the Council and the House of Delegates.

Dr. Williamson thought this covered all the new points and that it was very complete. He had spent a great deal of time in going over the constitution and by-laws of many different societies, and compiling from them the features that he thought would be of the most use to this Association.

A medicolegal committee had been arranged for, and he thought that Dr. McCannel had worked out a plan several years ago that might be added to it. It had been left for the Council to fill in, and decide the part occupied and everything connected with the question of finances. He thought there was a very great necessity for having the constitution and by-laws printed and placed in the hands of the members as soon as possible. Very few of the men were at all familiar with what was expected of them, and when the constitution and by-laws were adopted, and each member was supplied with a copy, the business of the Association could be conducted in a more efficient manner.

Dr. Thomas Mulligan, Grand Forks, stated that there had been some confusion at the meeting on the preceding evening regarding the present constitution and by-laws of the State Medical Association, and he did not think the Chair had made any ruling on the matter. Dr. Rowe had read one article of the constitution which stated rather fully the manner in which the constitution would have to be revised or a new one adopted. Dr. Mulligan thought everyone appreciated the great amount of work that Dr. Williamson had put into the constitution and by-laws. He was a man who had taken a great deal of interest in the local society and State Association, but the speaker felt that if the constitution under which they were working at present provided specifically for the manner in which a new one was to be accepted they would have to abide by it, and asked that the Chair make a ruling on this matter.

The President said that at the last annual meeting Dr. Rowe stated that there was no official constitution and by-laws. They all knew that there was an old constitution and by-laws of 1904, but there had been amendments to that and it was not up to date in any particular. He felt it would be much wiser to have a new constitution and by-laws, and, if he made a ruling, it would be that there were no official constitution and by-laws at present, for the reason that the Association had none of record.

Dr. James Grassick, Grand Forks, stated that during the past year he had run across the official minutes of the meeting at which the first constitution was adopted. That constitution was adopted in the City of Larimore, in 1890, and held until there was some change in the American Medical Association. The American Medical Association then requested them to change their constitution so that it would be in harmony with the constitution of that organization. A committee was appointed, and that committee reported an outline as recommended by the American Medical Association, and that was adopted in the City of Fargo, he believed, in 1904, and that was the official constitution the Association had been working under since that time, with the amendments that had been made. It appeared to him that there was an official constitution, and that it should be on the records. As Dr. Mulligan had stated, if the constitution was to be amended it should be done in conformity with the outline which had been adopted.

Dr. Pray said that was true, if there was an

official constitution, but he had understood from Dr. Rowe that there was no official constitution.

Dr. Charles MacLachlan, New Rockford, thought that the Association must recognize some constitution. They could not be working with the parent organization and not have some constitution under which to work. He believed Dr. Grassick's statement was correct. When the constitution he referred to was adopted he was satisfied that a committee was appointed to go over that constitution and see what changes would be necessary and that this committee's report was presented and adopted. In view of the fact that there was no record of this except in their memories, he thought they must recognize the fact that they were working under a constitution, and that it could not be ignored in their present deliberations. The Association, in his opinion, should go on the basis from which it originally started and recognize the constitution which was now in the hands of the Secretary with the changes which had been adopted from time to time; and whatever changes might be found necessary at present should be made in conformity with the fact that there was a constitution. He did not see how they could get away from the fact that they had been working under a constitution, and any changes required must be adopted under the constitution they were working from.

Dr. Pray said that Dr. Rowe told him that all of his records had been burned in the fire that destroyed his home, and there was no constitution of record. The constitution to which Dr. Grassick referred to had marginal notes, and in view of the fact that the Secretary's records were all burned it could be said that there was no authentic constitution. He, therefore, ruled that, in view of the fact that the constitution and by-laws had been destroyed by fire, there were at this time no authentic constitution and by-laws.

Dr. W. C. Fawcett, Starkweather, moved that, in view of the President's statement, that the constitution and by-laws had been burned, they adopt the report of the Committee as reported by Dr. Williamson. Seconded by Dr. C. J. Fortun, Mayville.

Dr. Williamson explained that this new constitution was just as near the old one as it could possibly be made, with all the marginal notes written in.

The Secretary thought the thing could be very easily settled by saying that the report of the Committee on Revision of Constitution and By-Laws was accepted.

Dr. Charles MacLachlan was of the opinion that they were anticipating troubles that might come up. If the report of the Committee was acceptable to the House of Delegates it would be in order for a member of the House of Delegates to make a motion that as an emergency existed in the fact that the Association had no constitution at present, the constitution having been lost by fire, the House, unanimously setting aside by motion the previously existing constitution and by-laws, they should adopt this one. If that motion carried without a dissenting vote it seemed to him that they could take care of the whole matter right there.

Dr. James Grassick asked whether the House of Delegates had the power to make a constitution and adopt a new one. He thought under the old constitution it had to be voted upon in open meeting, not by the House of Delegates.

Dr. Charles MacLachlan said he thought Dr. Grassick was right, but when it was explained to the Association that the report of the Committee was acceptable to the House of Delegates, the Association would unanimously vote to adopt the constitution.

Dr. Fawcett withdrew his motion as the Committee wished further consideration.

Dr. Pray suggested that the Committee consider the matter further and report Wednesday morning.

APPOINTMENT OF COMMITTEES

Nominating Committee

The President appointed the following members to serve as a Nominating Committee: Dr. Thomas Mulligan, Grand Forks; Dr. R. D. Benson, Hannaford; and Dr. W. C. Fawcett, Starkweather.

MISCELLANEOUS BUSINESS

Dr. Charles MacLachlan said there was a matter that was of considerable importance to the profession at large, although it was nothing that the House of Delegates could take definite action upon. It was the matter of a fee bill for the state. It had not been closely adhered to, but the state fee bill of $1.00 per mile for a country trip had a good deal to do with the profession at large. Since war prices had gone up, and doubled in many instances, in some Associations this matter had been taken up and discussed. While it did not make so much difference to many of the members it did make a great deal of difference to the younger men coming in. The Tri-County Society adopted a fee bill the first of January in conformity with the items men-

tioned in the old fee bill for services rendered. The outstanding feature was the increase in fees for services rendered. They had adopted the plan of charging $1.50, instead of $1.00, per mile for day calls during the winter and summer; $2.00 per mile one way for night calls, winter and summer; no call in the country to be made for less than $5.00, this to include one mile beyond the city limits; and a uniform charge for all life insurance examinations. Their fee bill covered everything that ordinarily comes up. The Cass County Society had asked them for a copy some three months before, and they had sent it. He had brought copies to be given to the House of Delegates so that they could think the matter over, and perhaps at the next meeting a committee might be appointed to take some action on the matter. He considered it important, and thought the old fee bill did not meet with present-day conditions. The farmers realized that they were getting more than twice what they did before the war for what they had to sell, and this new fee bill did not double the doctor's fees, but in some instances made them only half again as much as they were before. If the President agreed it could be passed over to the members of the House of Delegates, and a committee could be appointed at its next meeting. He believed the fee bill would act as a guide, and help the men to get what belonged to them.

The President was of the opinion that an emergency existed in this matter. It had seemed to him that in a court case the judge might take the old fee bill as something to go by.

Dr. G. M. Williamson moved that the President appoint a committee at once to study the fee bill, and report at the next meeting of the House of Delegates. Seconded by Dr. W. C. Fawcett. Carried.

The President appointed a committee consisting of Drs. R. H. Beek, Lakota; H. H. Healy, Grank Forks; and A. J. McCannel, Minot, to investigate the matter of the fee bill.

On motion the meeting adjourned at 12:40 P. M.

THIRD SESSION—WEDNESDAY, JUNE 25TH

The meeting was called to order by the President at 9:45 A. M.

There were present Drs. Grassick, Wicks, Ransom, Carr, Smyth, J. H. Rindlaub, Fawcett, Williamson, Trainor, A. J. McCannel, Benson, Whittemore, Greene, Fortun, and Wood.

Dr. L. B. Greene, Edgeley, moved that, as no official delegates were present, Dr. John Crawford of the Tri-County, and Dr. W. W. Wood of Stutsman, be recognized as the accredited delegates from these districts.

The President stated that the meeting had been called to pass on certain sections of the new constitution and by-laws so that they might be presented to the general session.

Dr. G. M. Williamson stated that the section referring to associate members had been changed to read as follows:

Section 3—Associate Members: Teachers in any regular medical school, resident in North Dakota, in no manner engaged in the practice of medicine and not otherwise eligible to regular membership, may become Associate Members of this Society, when elected Associate Members of the component society of the county in which said teachers live. Such members shall be designated Associated Members, and shall enjoy the same privileges as regular members except the right to vote or be elected to office.

It had been suggested that the Council should consist of ten members.

In the original draft of the constitution it had been stated that six members of the Board should constitute a quorum, but it had been thought that six might be too many, so this sentence had been changed to read: "A majority of the Councilors registered at any meeting shall constitute a quorum for the transaction of business."

The section regarding the officers was changed to read: "The President-Elect, Vice-President, Secretary and Treasurer shall be elected annually by the House of Delegates to serve for a term of one year. The Councilors shall be elected by the House of Delegates, three to serve for one year, four for two years, and three for three years. The Councilors already in office to remain in."

The annual dues were to be $5.00.

In regard to the Medical Defense Committee, it had been thought well to write in the provision adopted May 8, 1911, so the Society would be working under the same conditions as at present, the function to remain the same. If the committee saw anything in that plan which was not workable, it was suggested that it be left to the committee to make whatever changes were necessary, and write them in; if the present plan was satisfactory that was to be written in.

The committee recommended the adoption of the constitution and by-laws.

Dr. L. B. Greene, Edgeley, moved that the report of the Committee be accepted. Dr. A. D. McCannell, Minot, seconded the motion.

Dr. F. L. Wicks, Valley City, asked whether it was the intention to limit the Associate Mem-

bers to the teachers in the medical school of the state. He thought there might be men in the other institutions who might be valuable members.

Dr. Williamson stated that teachers in any medical school or other educational institution in the State of North Dakota might become Associate Members.

Dr. J. Grassick asked what provision had been made for amending the constitution at any time.

Dr. Williamson stated that the provision was the same as in the old constitution.

The motion was put to a vote, carried unanimously, and the constitution declared adopted by the House of Delegates.

Adjourned.

FOURTH SESSION—WEDNESDAY, JUNE 25TH

The meeting was called to order by the President, Dr. E. A. Pray, at 12:00 M.

There were present Drs. Grassick, Wicks, Ransom, Carr, J. H. Rindlaub, Fawcett, Williamson, Mulligan, Trainor, Whittemore, Greene, Wood, and Fortun.

After calling the roll the Secretary read the minutes of the preceding meeting, which, upon motion, were accepted as read.

REPORTS OF COMMITTEES

Dr. L. H. Labbitt, Enderlin, presented the following report:

Committee on Necrology

The past year has brought forcibly to our attention the strenuous times through which we are passing, and our wonderful opportunities of service to mankind.

The manhood of our country has been called upon to make sacrifices and render service to the utmost.

Patriotism has been the stimulus through which our young men have cheerfully gone forth to fight, and even make the supreme sacrifice, that we might enjoy the blessings of liberty for ourselves and our posterity.

Never in the history of the world have greater forces entered combat for higher ideals or more noble purposes. These ideals have been actuated by no selfish motives or hidden purposes. It has been the logical outcome of a great nation pledged to the greatest good to the greatest number.

These principles have always been foremost in our endeavors, and we have given to the world in this war, through our sanitarians and experts in preventive medicine, untold relief from suffering and distress, with the promise of a greater good for a still greater number.

When the history of this war is written we shall have reason to be proud of the record the medical profession has made.

Two of our number lost their lives in military service: Dr. W. E. Cowper, of Michigan, N. D., died at Liverpool, England, March 9, 1919, of pneumococcic meningitis, following lobar pneumonia. Dr. Cowper was 44 years of age and had practiced in North Dakota twenty-one years.

Dr. S. D. Henderson, of Lansford, died at Camp Dodge of influenza. He was born at Halstad, Minnesota, Nov. 30, 1888. He obtained his B. A. degree from the University of Michigan in 1912, and graduated from Tulane Medical College in 1916.

In the last year our ranks were further depleted by those who made the supreme sacrifice in the less spectacular, if not the less important, work of caring for those at home.

In the strenuous time of the influenza epidemic many men felt it their duty to stay at work and make their calls, though physically exhausted from overwork and loss of sleep. The price they paid was in the service of their country and the conscientious performance of their duties.

Dr. Robert Clifton Reimcke died at Harvey, N. D., on October 24, 1918, of influenza. He was a graduate of Rush Medical College, 1905, practiced in Chicago, and located at Harvey in 1917.

Dr. Fred W. Bordwell, of Marmarth, N. D., died October 7, 1918, of influenza, at the age of 40. He was a graduate of the University of Illinois, College of Medicine and Surgery, 1904, and located at Marmarth and was a charter member of the Southwest District Medical Society, organized in 1911.

Dr. Gabriel Nygaard, of Luverne, N. D., was born May 19, 1885, at Salavanger, Norway. He died on October 16, 1918, of pulmonary tuberculosis complicated by influenza. He was a graduate of the Chicago College of Medicine and Surgery, 1910.

Dr. Willis E. White, Mayville, N. D., was born December 1, 1860, in the state of New York, and died on January 21, 1919, of apoplexy. He graduated from Miami Medical College, Cincinnati, in 1886, and located in Mayville in 1900.

Dr. Alpha M. Whitten, Fort Totten, N. D., died at the age of 62 of angina pectoris.

Dr. L. U. Iverson, Christine, N. D., was born in Jackson, Wis., on September 16, 1865. He graduated from the University of Minnesota in 1897, and practiced at Christine since that date. His death was due to suicide.

The example of these men who have crossed the Great Divide should be a stimulus to us in our endeavors to serve mankind. Let us honor them for their noble work and lives well spent, in the service to which they dedicated themselves.

(Signed) L. H. LABBITT, M. D.

Dr. H. E. French, Grand Forks, moved that the report be accepted, and placed on file. The motion was seconded by Dr. W. P. Baldwin, Casselton, carried, and so ordered.

Committee on Fee Bill

Dr. H. H. Healy presented an outline of a Fee Bill or guide, based on that made by the Tri-County Society, but containing many changes. Office consultations to be from $2.00 to $10.00; *x*-ray pictures for diagnosis $10.00 to $50.00. He thought this not too much, as in many cases a series of plates, possibly ten or twelve, were necessary in stomach or abdominal work, and it meant a couple of days' work. The night fee

to be in force between 11 P. M. and 7 A. M., instead of from 10 P. M. to 6 A. M., as it was harder to make a call between six and seven in the morning than between ten and eleven at night. Mileage, one way, $2.00. Administering anesthetic, $5.00 to $15.00, instead of $10.00 to $15.00, as the Committee thought $10.00 might be an excessive charge for many minor cases, such as extracting teeth, lancing a boil, or even circumcision. The fee for amputation of the foot to be $100.00 to $150.00. Dislocation of lower jaw, fingers, toes, or clavicle, to range from $10.00 to $50.00, as the Committee felt there should be a charge as low as $10.00 for reducing a dislocation of the finger, which was a very simple operation. In deformities of the extremities, such as contracted fingers and toes, shortened tendons, cicatricial contractions, fibrous ankylosis, or minor club-foot, the minimum charge was reduced from $50.00 to $25.00, leaving the maximum at $200.00. Intubation fee was reduced from $50.00 to $25.00, leaving the maximum at $200.00. Attendance on normal labor from $25.00 to $35.00. Accidental abortion, from $25.00 to $35.00. Induction of premature labor raised to $50.00 as a minimum. Version or craniotomy, minimum raised from $40.00 to $50.00. Operations on the vertebræ or within the spinal canal, minimum charge raised to $200.00. Rectal operations for fissure, fistula, stricture, deep abscess, hemorrhoids, maximum charge raised from $100.00 to $150.00. Operations on the kidney, minimum charge raised from $100.00 to $150.00, leaving the maximum at $300.00. Radical cure of hydrocele or removal of malignant growths, raised from $25.00 as a minimum and $100.00 as a maximum to $50.00 to $300.00. The Committee thought this might be construed to include cancer of the breast, and the former fee was altogether too low for that. No call in the country to be less than $5.00. Gonorrhea, a minimum charge of $25.00, a payment of $10.00 to be made at the beginning of treatment. Consultation fee, $10.00 to $15.00. A uniform fee of $5.00 for all life insurance examinations.

Dr. L. B. Greene, Edgeley, moved that the report be adopted. Seconded by Dr. Thomas Mulligan.

The Secretary called the attention of the Committee to the fact that the Association already had a fee bill, and if they did not wish to amend it this should be brought in as a new fee bill. This was better than the old one, which was the fee bill of the Tri-County Society, and, if it was adopted, it should be put in shape so that a printer could make copies of it.

Dr. Greene withdrew his former motion, and moved that the report be accepted, that the Committee be continued, and that they draw up the fee bill in proper form, have it printed, and that a copy be sent to each member of the Association. Seconded by Dr. Thomas Mulligan, carried, and so ordered.

Report of Committee on Medical Defense

Dr. A. Carr, Minot, presented the following report:

REPORT OF THE ATTORNEYS

Minot, N. D., June 30, 1919.

North Dakota State Medical Association, Grand Forks, North Dakota.

Gentlemen: Since my report to you of June 15, 1918, the following matters have been handled by us as attorneys for the Association, and by insurance companies where we have personal knowledge of the matter, as follows:

In the case of Beardsley vs. Ewing & Ewing, of Kenmare, the Supreme Court affirmed the verdict of the District Court on appeal, and the Frankfort General Insurance Company, one of the insurance companies, paid their proportion of the loss. The balance of the loss was covered by insurance with the Medical Protective Association, of Fort Wayne, Indiana, and I have never heard whether they settled for their share of the loss or not.

The case of Semchenko vs. Dr. A. S. Nicholson, of Max, now of Williston, was tried on the 17th and 18th days of June, 1919, and resulted in dismissal of the action, the plaintiff being unable to make a cause of action.

There are still pending the case of Philip Ott vs. Dr. Maercklein, of Dickinson, and the case of Clarence Young vs. Dr. W. B. Scott, of Ray. Neither of these cases has yet been tried.

Also during the last year, Dr. Stephan M. Johns, of Velva, was sued for malpractice for negligent reduction of fracture of the leg. The case resulted in a directed verdict and dismissal of the action. This was defended by the United States Fidelity & Guaranty Company.

There is also now pending an action of Moses Putney, wherein he claims damages against Stephan M. Johns by reason of the negligent reduction of a broken limb of the minor son of Putney. This is defended by the U. S. Casualty Company of New York, and the writer has investigated the matter and feels assured that no judgment for malpractice will be obtained against the doctor.

There were two cases pending against a doctor at Jamestown, but in both instances the doctor was insured, and I notified him that the Association did not defend where the insurance companies were defending.

The only case that has been tried at the expense of the Association during the fiscal year ending June 20, 1919, is the case of Semchenko vs. Nicholson, as above referred to.

The decision of the Supreme Court in the case of Beardsley vs. Ewing & Ewing was a bad decision for the doctors, in view of the fact that they held that remarks made by counsel as to the doctors all standing together

and things of that kind were not prejudicial error, justifying the setting aside of the verdict, and granting a new trial; otherwise the decision did not change the rule heretofore governing the trial of malpractice cases.

Respectfully submitted.

BOSARD & TWIFORD,
By R. H. Bosard.

Dr. L. B. Greene, Edgeley, moved that the report be accepted. Seconded by Dr. W. C. Fawcett, Starkweather, carried, and so ordered.

Report of Committee on President's Address

Dr. G. M. Williamson presented the following report:

Mr. Chairman: We thank the President for his work on behalf of the Association during the past year, and congratulate him on his excellent address.

In considering the various recommendations he made we would recommend that a committee be appointed to make careful inquiry into the law regarding the registration of dentists, lawyers, and possibly physicians.

We would further recommend that, following the suggestion in the President's address, the individual component societies undertake a wider dissemination of things medical among the laity.

We also urge the individual members of the profession to more active work with the Tuberculosis Committee.

We also urge the Council to take action on that part of the address regarding the appropriation of funds for the Committee on the History of Medicine, and that they appropriate such a sum as in their judgment seems best.

As regards the Government control of spirituous liquors, we agree with the President that "we condemn the interdiction of any drug in the practice of medicine."

(Signed) G. M. WILLIAMSON, M. D.
A. CARR, M. D.
J. H. RINDLAUB, M. D.

Dr. T. Mulligan, Grand Forks, moved that the report be accepted. Seconded by Dr. W. W. Wood, Jamestown, carried, and so ordered.

Report of Committee on Publication of Proceedings

Dr. James Grassick, Grand Forks, moved that THE JOURNAL-LANCET be continued as the official organ of publication, as it was last year. Seconded by Dr. A. Carr, Minot.

Dr. A. E. Pray stated that he had gone to a good deal of trouble in the past year in taking up the matter of ethics of medical magazines. *Minnesota Medicine* is an applicant for the work of the Association, as it was last year. The American Medical Association was doing all it possibly could to get pure ethics in advertising, and was eliminating a lot of the material that was not considered ethical, and by combining several magazines that fraternized with them it was possible for the magazines to make a living without publishing unethical advertising. The American Medical Association had sent him a bunch of advertisements that had been clipped from THE JOURNAL-LANCET, which they would not accept for their magazine, and Dr. Pray thought that if the Association was going to help to establish pure ethics in advertising this matter should be considered.

Dr. L. B. Greene, Edgeley, thought the point brought up by Dr. Pray was very important. Many advertisements appeared in THE JOURNAL-LANCET which were a good deal the same as those which were published in the quack magazines. He thought it would be an excellent thing for the Association to give its support to a magazine that was trying to live up to a high standard of ethics. He was in favor of trying *Minnesota Medicine* for a year at least. It was by such support that the profession could have magazines that were ethical, and he felt this support should not be denied.

Dr. James Grassick, Grand Forks, said this idea of the ethical proposition was a matter of degree rather than kind. The matter had been discussed a good deal, but he felt that THE JOURNAL-LANCET had served them well, they had become accustomed to it, and it suited him all right. He presented some advertisements that had been clipped from *Minnesota Medicine*, which he thought illustrated the proposition of ethics as a matter of degree and not kind. He presented the advertisement of the "Storm Binder and Abdominal Supporter" (Patented) and stated that although there was a rule that no physician should patent anything this advertisement was signed by a doctor, which was against the principles of medical ethics. This advertisement also appeared in the *Journal of the American Medical Association*. Dr. Grassick also presented an advertisement from *Minnesota Medicine* telling of a remedy that was supposed to be useful in acute bronchitis, urethritis, swollen glands, gastro-intestinal catarrh, and duodenal ulcer; and he thought it would be hard to find a more unethical advertisement published anywhere.

Dr. R. D. Benson, Hannaford, stated that while ethics might be a matter of opinion there were things in THE JOURNAL-LANCET which were not only unethical, but the firms advertised were absolutely crooked. He knew this from personal experience, having had an unfortunate experience with automobile tires purchased through an advertisement in that magazine. The

tires were very unsatisfactory, and, although they were guaranteed to last for 7,000 miles, he could secure no settlement from the firm. He was not in favor of the Association adopting THE JOURNAL-LANCET as its official organ.

Dr. F. L. Wicks, Valley City, defended the suggestions made by Dr. Benson and Dr. Greene in regard to *Minnesota Medicine*. The fact that a couple of advertisements cut out from that journal were unethical did not prove that those which appeared in THE JOURNAL-LANCET were ethical. There might be some excuse for one or two unethical things creeping into a magazine, even when it was looked after, but THE JOURNAL-LANCET did not set a good record in that respect. He wished to go on record as favoring *Minnesota Medicine,* for, if that was the magazine they thought it was, it could be used to the advantage of the Association.

Dr. G. M. Williamson expressed great surprise that Dr. Grassick had found unethical advertisements in *Minnesota Medicine,* and he thought there was something behind the claim that one paper was all right and the other was all wrong. He believed the whole thing was a fight between the fellows down in Minneapolis and St. Paul, and did not believe the Association wanted to get into it. At the meeting of the South Dakota State Medical Association early in the season they adopted THE JOURNAL-LANCET again. At present he was in favor of continuing as they were with THE JOURNAL-LANCET.

Dr. A. Carr, Minot, concurred with what Dr. Williamson said. He had investigated the matter as well as he could, and found that by changing journals they would be jumping out of the frying pan into the fire, and he had seconded Dr. Grassick's motion for that reason.

Dr. A. E. Pray thought Dr. Williamson would remember that a few years ago Dr. Pray was one of the men who knocked out THE JOURNAL-LANCET for one year; Dr. Williamson was also against it. After a year the magazine agreed to be more careful, but the advertising was worse rather than better, and they had paid no attention to what they said. The American Medical Association furnished all the advertising for a large group of magazines, and if some unethical ones slipped by it was a mistake. So far as he knew there was no fight between Minneapolis and St. Paul. He wished to be as ethical as possible, and for that reason thought a change should be made.

Dr. Grassick's motion was put to a rising vote and carried, and THE JOURNAL-LANCET declared adopted as the official organ of publication for the

The Secretary then stated that THE JOURNAL-LANCET had written him that it was quite immaterial to them what was done. They were willing to serve the Association if it gave them the news of the state, but would make no fight to retain the work.

Report of the Committee on Tuberculosis

Dr. James Grassick, Grand Forks, read the report of the Committee, as follows:

The House of Delegates of the North Dakota Medical Association:

Gentlemen: Your Committee on Tuberculosis begs leave to submit the following for your consideration:

A year ago we reported to this Association that there were 1,000 deaths yearly in the state from the disease, and upwards of 5,000 active cases, which statement we believe to be approximately correct. We emphasized the need of more sanatorium room and equipment. It is a pleasure to report that the last legislature made an appropriation of $100,000 for a new Infirmary Building at our State Sanatorium at Dunseith, and for other necessary improvements. This will enable the institution to care for many more patients, to enlarge and improve its sphere of usefulness, and in other ways to better meet the needs of those whom it is designed to serve. The same legislature, recognizing the work done by the North Dakota Anti-Tuberculosis Association in conducting an educational campaign against the disease and in furthering the cause of good health throughout the state, made an increased appropriation for its use.

The tuberculous, rejected or returned, from the army, are deserving of the very best that we have to offer. At our last meeting your Association went on record as favoring a plan whereby the component societies would supervise in their respective districts the care of those unfortunates who, through no fault of theirs, were denied the privilege of fighting their country's battles. Your committee has not been informed on what has been done in this respect. The Anti-Tuberculosis Association, however, has supplied all reported returned tuberculous soldiers in the state with appropriate literature and advice, and, so far as possible, its nurses have visited them in their homes, and in many cases arranged for institutional treatment. More might have been done had funds and workers been available.

A feature of the work of the Anti-Tuberculosis Association was placing in the field the public health nurses whose duties were to examine school children for physical defects, to discover foci of tuberculous infection, and to give demonstrations and talks on sanitation and hygiene, with the view of influencing boards of education to employ whole-time public school nurses. The results have been so gratifying that this feature will be continued and extended. A summary of their work is as follows:

Number of children examined	7,079
Number of children having defects	5,358
Number of children having defects of vision	949
Number of children having defects of hearing	249
Number of children having hyper-tonsils	2,818
Number of children having defects of teeth	3,298
Number of children having impaired nasal breathing	578
Number of children retarded in grades	1,388
Number of notices sent to parents	5,091

The results of this work are seen in the increased number of counties employing school nurses, in the passing by the last legislature of laws making this easier, and in the number of corrections of mal-conditions that followed.

For the past year there have been 143 positive diagnoses made of tuberculosis at the Public Health Laboratory, and all of these persons have been supplied with anti-tuberculosis literature, and placed on the *Pennant's* mailing list.

Another activity was launching the Modern Crusaders' Movement, the idea being to educate the children of the state in health habits, so that they might grow up, thinking health and living health.

That you may know something of what is being done, the following list of materials sent from the Secretary's office gives a slight idea of our work:

Manuals sent out	5,095
Folders sent out	20,395
Buttons sent out	6,785
K. Pins sent out	1,554
K. B. Pins sent out	1,321

Over 33 per cent of the total school enrollment of the state have enlisted in this movement, and are living up to its health rules.

And this says nothing of the letters written, the circulars mailed. the questions answered, the instructions given, the visits made, the field work done, and the thousand and one items that enter into a great movement of this kind; and the work is yet in its infancy. What it will mean when it reaches full development can only be approximately appreciated. At all events its future has in it great possibilities for good. The bearing that these activities may have on the control of tuberculosis is based on the assumption that early infection is the rule and that mouth infection is exceedingly common. We believe that the facts will bear out this contention and that the results will be shown in a decreased incidence of the disease.

Respectfully submitted,

J. Grassick, M. D.
Fannie Dunn Quain, M. D.
F. W. MacManus, M. D.

Dr. F. R. Smyth, Bismarck, asked where Dr. Grassick got his statistics about the number of deaths from tuberculosis in the state. He gave them as 1,000 and that was not in the last few years, and he thought it important to know where the statistics came from.

Dr. Grassick stated that the figures used were taken from a report of Surgeon General Fox of the United States Public Health Service, who had made a survey of the State. He checked over the recorded statistics in the office of the State Board of Health, as well as those of the various counties in the State, and on the data thus obtained he based his report. As everyone conversant with the facts knows, we have no full State statistics, but we have some cities and counties in the State where very nearly correct records of deaths are kept. The committee, after due consideration of every available source of information, and comparison with the statistics furnished by other adjoining States and by the Census Bureau of the United States, feel that their estimate is a very conservative one.

Dr. Smyth thought it was not safe for the Association to approve a report stating that 1,000 deaths had occurred in the state unless it was very thoroughly substantiated. Comparing statistics from other states was not the way to ascertain the number of deaths in a state. They should be taken from the death-rates of the state in question. The deaths averaged 4,000, and, if there were 1,000 from tuberculosis, that meant 25 per cent were from tuberculosis, which was outrageous. The rate for the United States is 10 per cent and there has never been any reason shown why North Dakota should have 25 per cent. He did not think this was correct, and Dr. Grassick did not claim that it was taken from the state records. In Dr. Smyth's opinion it was not safe to approve the report without better authority.

Dr. Grassick said the matter of statistics had been brought up a good many times. They had no full statistics, and until they had a man who was paid to compile them they never would have. With the authority of the Public Health Service back of them the committee thought they were quite within their sphere in making the report as they did. He was willing to amend the report if the Association so desired.

Dr. G. M. Williamson, Grand Forks, moved that the report be accepted, subject to Dr. Grassick's amendments. Seconded by Dr. Thomas Mulligan, Grand Forks, carried, and so ordered.

Report of Committee on Nominations

Dr. W. C. Fawcett, Starkweather, presented the following report of the Nominating Committee:

President—Dr. W. P. Baldwin, Casselton.
President-Elect—Dr. Fred Ewing, Kenmare.
1st Vice-President—Dr. H. E. French, Grand Forks.
2nd Vice-President—Dr. E. P. Quain, Bismarck.
Secretary—Dr. H. J. Rowe, Casselton.
Treasurer—Dr. W. F. Sihler, Devils Lake.

Councilors for Three Years

Dr. G. F. Drew, Devils Lake District.
Dr. L. B. Greene, Edgeley, Southern District.
Dr. O. A. Knudson, Buxton, Traill-Steele District.

Councilors for Two Years

Dr. E. M. Ransom, Minot, Northwestern and Kotana District.
Dr. Paul H. Burton, Fargo, Cass District and Richland County.
Dr. LeRoy G. Smith, Medina, Stutsman District.
Dr. Chas. MacLachlan, New Rockford, Tri-County District.

Councilors for One Year

Dr. Paul H. Burton, Fargo, Cass District.
Dr. F. R. Smyth, Bismarck, Sixth District.
Dr. J. E. Countryman, Grafton, Grand Forks District.

Delegates to the A. M. A.

Dr. E. A. Pray, Valley City

Alternate

Dr. A. J. McCannell, Minot

Recommendations for State Board Medical Examiners

Dr. G. J. McIntosh, Devils Lake
Dr. V. J. LaRose, Bismarck
Dr. F. W. McManus, Williston

(Signed) THOMAS MULLIGAN, M. D.
R. D. BENSON, M. D.
W. C. FAWCETT, M. D.

Dr. G. M. Williamson, Grand Forks, moved that the report be accepted. Seconded by Dr. W. W. Wood, Jamestown, carried, and so ordered.

Dr. G. M. Williamson moved that the Council appropriate a sum of $100.00 for the expenses of the Delegate to the American Medical Association. Seconded by Dr. James Grassick, carried, and so ordered.

Report of the Auditing Committee

Dr. E. M. Ransom, Minot, stated that the committee had looked over the Treasurer's report and found everything essentially correct.

The committee recommended an appropriation of $250.00 for the work of the History Committee. They had consulted with Dr. Grassick, the chairman of that committee, and it was his opinion that each component society should do about the same amount of work that he had done in his local society. His work had been confined almost entirely to his own society, but he recommended that each component society should do the same work, without expense, but that the man in charge of the central work should have an appropriation of $250.00.

Dr. F. R. Smyth, Bismarck, moved that the report of the committee as a whole be adopted. Seconded by Dr. Thomas Mulligan, carried, and so ordered.

Selection of Meeting-Place

Dr. A. Carr, Minot, said he came as a representative from the "Magic City," which he thought was a misnomer; it should be called "The Hub." It was the wish of the Northwestern District Society that the Association should come to Minot in 1920, and be entertained by the Minot District Society, together with the citizens of Minot. He could not promise the speed limit that had been granted by the Mayor of Grand Forks, but they were very anxious to entertain the State Association at Minot, and he could give his word of honor that, if they would agree to come, they would be given a better time than they had had up there before.

Dr. W. C. Fawcett, Starkweather, moved that the invitation be accepted. Seconded by Dr. G. M. Williamson, carried, and Minot declared the official meeting-place for next year.

Printing of Constitution and By-Laws

Dr. George M. Williamson moved that a special committee of three be appointed by the incoming President for the purpose of getting the Constitution and By-Laws printed and distributed to the members. Seconded by Dr. C. E. Stackhouse, Bismarck, carried, and so ordered.

On motion the meeting adjourned at 1:20 P. M.

FOURTH SESSION—WEDNESDAY, JUNE 25TH

The meeting was called to order by the President, Dr. E. A. Pray, Valley City, at 2:40 P. M.

Report of Committee on a Public Health Association

Dr. H. E. French, Grand Forks, presented the following report of the Committee appointed to confer with Dr. W. A. Evans on the subject of a Public Health Association:

Mr. President,—Your Committee appointed to confer with Dr. W. A. Evans, and to report upon a plan for launching a State Public Health Association, would recommend as follows:

1. That a Committee consisting of the Secretary of the State Board of Health, the Superintendent of the North Dakota Tuberculosis Sanitarium, and a third member to be named by the Chair, be appointed at this time.

2. That this Committee be instructed to study the situation, endeavor to enlist the co-operation of the various official and non-official groups interested in any phase of public health work, and bring in a report at the next annual meeting, with the launching of a North Dakota Public Health Association at that time, if possible.

(Signed) H. E. FRENCH, M. D.
V. J. LAROSE, M. D.
F. L. WICKS, M. D.

Dr. Fred Ewing, Kenmare, moved that the report be adopted. Seconded by Dr. W. P. Baldwin, Casselton, carried, and so ordered.

RESOLUTIONS OF SYMPATHY WITH THE WIFE OF DR. PAUL SORKNESS

Grand Forks, N. D., June 25, 1919.

Dear Mrs. Sorkness:

The House of Delegates of the North Dakota Medical Association in annual session at Grand Forks, N. D., unanimously adopted the following:

WHEREAS, it has grieved us to learn of the illness of

Dr. Paul R. Sorkness, an honored and much respected member of our Association, therefore

Be it resolved, that we extend to his loving and faithful wife our expressions of deep concern for his welfare, coupled with the hope that he may regain his strength and that a rift in the clouds may show the light beyond

(Signed) J. Grassick, M. D.
Chas. MacLachlan, M. D.
F. R. Smyth, M. D.

Dr. E. A. Pray: The past year has been a very enjoyable one to me, and I wish to express my appreciation of the honor done me by this Association. The time has come to welcome the new officers and I will ask Dr. Rowe to read the list of officers recommended by the Nominating Committee and elected by the House of Delegates.

The Secretary read the list of officers.

The President then requested Dr. Fred Ewing, President-elect, to escort Dr. W. P. Baldwin to the chair. (Applause.)

Dr. W. P. Baldwin: Gentlemen—I want to thank you for the honor you have done me in electing me your President. I shall try to take care of the duties of the office to the best of my ability and for the best interests of the Association. (Applause.)

Upon motion the Association adjourned to meet in Minot in 1920.

H. J. Rowe, M. D.,
Secretary.

PROCEEDINGS OF THE GENERAL MEETING OF THE ASSOCIATION

First Session—Tuesday, June 24th

The meeting was called to order by the President, Dr. E. A. Pray, of Valley City, North Dakota.

After the invocation by the Rev. J. Watson, of Grand Forks, the mayor of the city, Dr. H. M. Wheeler, gave an address of welcome, which was responded to by Dr. J. P. Aylen, of Fargo.

The Vice-President, Dr. W. P. Baldwin, Casselton, took the chair, and the President, Dr. E. A. Pray, Valley City, delivered the President's Address.

Dr. Baldwin said: I think we should congratulate our President on his excellent paper this morning. There are many things we have not done which we should have done. Let us take his advice and go ahead and hit the mark.

Dr. W. F. Sihler, Devils Lake, read a paper entitled "Acute Melanotic Carcinosis: Report of One Case with Specimen." The paper was discussed by Dr. A. G. Long, Grand Forks; Dr. V. J. LaRose, Bismarck; Dr. L. H. Labbitt, Enderlin; and, in closing, Dr. Sihler.

Dr. F. C. Rodda, Minneapolis, Minn., presented a paper on "Infant-Feeding." The same was discussed by Dr. W. W. Wood, Jamestown; Dr. W. P. Baldwin, Casselton; Dr. H. G. Irwin, Russell; Dr. B. W. Abranson, Kief; and, in closing, Dr. Rodda.

Dr. G. M. Williamson, Grand Forks, announced that at five o'clock, at the close of the afternoon session, automobiles would be waiting to convey the members and their wives and friends to the Country Club for a garden party, lasting from five-thirty to seven-thirty. Upon their return to town they would be taken to the Presbyterian Church, where there would be an organ recital followed by a lecture by Dr. W. A. Evans, of Chicago.

Second Session—2 p. m.

The meeting was called to order by the President, Dr. E. A. Pray, at 2 p. m.

Dr. V. J. LaRose, Bismarck, presented a paper entitled "Prostatectomy: A Study of Thirty-five Cases from the Standpoint of Morbidity and Mortality." The paper was discussed by Dr. J. E. Engstad, Grand Forks; Dr. A. O. Arneson, McVille; Dr. A. F. Bratrud, Grand Forks; and, in closing, Dr. LaRose.

Dr. O. Bjornson, Winnipeg, Canada, read a paper on "The Use and Misuse of the Forceps in Labor." This paper was discussed by Dr. H. G. Woutat, Grand Forks; Dr. R. H. Beek, Lakota; and, in closing, Dr. Bjornson.

Dr. Martin P. Rindlaub presented a paper on "Medical Examination of Soldiers about to be Discharged from the Army." There was no discussion on this paper.

Dr. A. F. Bratrud, Grand Forks, presented a paper entitled "Peripheral Nerve Surgery." The paper was discussed by Dr. W. H. Witherstine, Grand Forks.

Dr. J. G. Lamont, Dunseith, who was to have presented a paper on "Demonstration of Artificial Pneumothorax," could not be present with his patient, and the contribution was passed.

On motion the meeting adjourned at 4:45 p. m. to proceed to the garden party at the Country Club which had been arranged by the local society.

Following this there was to be an organ recital by Professor Paolo Conte, of Wesley College, Grand Forks, and some addresses at the Presbyterian Church.

The annual banquet was held at the Dacotah Hotel at 10 p. m.

THIRD SESSION—WEDNESDAY, JUNE 25TH

The meeting was called to order by the President, Dr. E. A. Pray, at 10 A. M.

The President stated that, inasmuch as an emergency existed owing to the fact that the constitution and by-laws had been burned in a fire which destroyed Dr. Rowe's effects, it had been thought necessary to appoint a committee to formulate a new constitution and by-laws. The constitution and by-laws presented by this committee had been adopted by the House of Delegates, and the Chairman of the Committee, Dr. G. M. Williamson, would present them to the general assembly for approval.

Dr. Williamson stated that the new constitution and by-laws differed very little from the old one, and he thought it hardly necessary to read it as it would consume a great deal of time. In his opinion, all that was necessary was to have some member of the Association make a motion that the report recommended by the House of Delegates be accepted.

Dr. V. J. LaRose, Bismarck, moved that the constitution and by-laws recommended by the House of Delegates be adopted. Seconded by Dr. Paul H. Burton, Fargo. The motion was put to a vote and unanimously carried.

The President declared the new constitution and by-laws adopted.

Dr. W. A. Evans, Chicago, presented a paper entitled "Some Effects Produced by the Grippe." The paper was discussed by Dr. F. W. MacManus, Williston, and, in closing, by Dr. Evans.

The President appointed the following committee to confer with Dr. Evans in reference to forming a State Public Health Association: Dr. H. E. French, Grand Forks; Dr. V. J. LaRose, Bismarck; and Dr. F. L. Wicks, Valley City.

Dr. E. P. Quain, Bismarck, read a paper on "Inguinal Hernia." The paper was discussed by Dr. R. D. Campbell, Grand Forks.

Dr. C. N. Callander, Fargo, presented a paper on "The Interpretation of Joint Conditions with Special Reference to Those of the Knee-Joint." There was no discussion on the paper.

FOURTH SESSION—WEDNESDAY, JUNE 25TH

Dr. Fred Ewing, Kenmare, presented a paper on "Post-Operative Care of the Infected Abdomen." The paper was discussed by Dr. H. M. Waldren, Drayton; Dr. Thomas Mulligan, Grand Forks; Dr. V. J. LaRose, Bismarck; Dr. W. H. Sihler, Devils Lake; and, in closing, by Dr. Ewing.

Dr. H. E. Michelson, Minneapolis, Minnesota, read a paper on "Some Notes on the Pathology and Treatment of Gonorrhea." The paper was discussed by Dr. F. R. Smyth, Bismarck; and Dr. Thomas Mulligan, Grand Forks.

Dr. Thomas Mulligan presented the following resolution: Resolved, That the North Dakota State Medical Association heartily endorses the efforts of the United States Government to stamp out venereal disease, and pledges the assistance of its members to the State Board of Health of North Dakota in enforcing the law and regulations for the control of venereal disease in this State.

Dr. H. E. French, Grand Forks, moved that the resolution be adopted. The motion was seconded by several members, carried, and so ordered.

Dr. F. R. Smyth, Bismarck, read a paper on "The Control of Venereal Disease as a Public Health Measure." There was no discussion on the paper.

Dr. G. Golseth, Jamestown, read a paper entitled "The Differential Diagnosis Between Trachoma and Follicular Conjunctivitis." There was no discussion.

The Secretary read the following notice:

Mr. President,—Please spread a note of thanks to the Grand Forks ladies on the minutes in behalf of the visiting ladies for their royal entertainment of them.

(Signed) MRS. J. G. LAMONT, Dunseith.
MRS. A. W. SWENSON, Bisbee.

Dr. L. B. Greene, Edgeley, moved that a rising vote of thanks be given to the Grand Forks Medical Society and their friends for the splendid hospitality and entertainment that had been extended to the Association. Unanimously carried.

The Association then adjourned.

DISTRICT AND COUNTY ROSTER

CASS COUNTY MEDICAL SOCIETY

PRESIDENT
Aylen, J. P.....Fargo

SECRETARY
Burton, Paul H.....Fargo

Awty, Wm.....Fargo
Aylen, J. P.....Fargo
Bailey, Fred H.....Fargo
Baillie, W. F.....Hunter
Bakkie, Hans.....Lisbon
Baldwin, Wm. P.....Casselton
Bennett, C. E.....Aneta
Burton, Paul H.....Fargo
Callander, C. N.....Fargo
Carpenter, Geo. A.....Fargo
Clark, Horace.....Wheatland
Darrow, E. M.....Fargo
Darrow, Kent E.....Fargo
Gronvold, F. O.....Fargo
Hanna, J. F.....Fargo
Huntley, H. B.....Leonard
Kachelmacher, C.....Fargo
Labbitt, L. H.....Enderlin
MacGregor, Murdock.....Fargo
Miller, H. W.....Casselton
Morris, A. C.....Fargo
Nichols, A. A.....Fargo
Nichols, Wm. C.....Fargo
Oftedal, Sverre.....Fargo
Patterson, A. G.....Lisbon
Patterson, T. C.....Lisbon
Platou, L. S.....Fargo
Rindlaub, Elizabeth P.....Fargo
Rindlaub, J. H.....Fargo
Rindlaub, M. P.....Fargo
Rowe, H. J.....Lisbon
Sand, S. O.....Fargo
Skelsey, A. W.....Fargo
Sorkness, Paul.....Fargo
Tronnes, N.....Fargo
Wands, E. E.....Lisbon
Weible, R. E.....Fargo

DEVILS LAKE DISTRICT MEDICAL SOCIETY

PRESIDENT
Lamont, J. G.....Dunseith

SECRETARY
Drew, G. F.....Devils Lake

Arneson, A. O.....McVille
Barton, W. C.....Belcourt
Begtrup, O. N.....Rugby
Call, A. M.....Rugby
Carter, J. A.....Warwick
Claybough, W. R.....Glenora
Cuthbert, W. H.....Crary
Drew, G. F.....Devils Lake
Engesather, A. D.....Brockett
Fawcett, W. C.....Starkweather
Floew, A. T.....Harvey
Gullaume, Wm.....St. John
Hamilton, J. S.....Bathgate
Hayhurst, J. O.....Rollette
Horsman, A. T.....Devils Lake
Jamieson, G. V.....
Jones, W. D.....Devils Lake
Lamont, J. G.....Dunseith
Lohrbauer, Ejner.....Lakota
McGurren, C. J.....Devils Lake
McIntosh, G. J.....Devils Lake
McMurtry, W. C.....Wolford
Moeller, Thor.....Devils Lake
Nicholson, E. G.....Lawton
Roberts, F. J.....Cando
Sihler, W. F.....Devils Lake
Smith, Clinton.....Devils Lake
Sorenson, A. R.....Rugby
Swenson, A. W.....Bisbee
Verrett, B. D.....Rolla
Vigeland, J. C.....Brinsmade
Warren, J. W.....Leeds
Wicklund, C. A.....Wildrose

GRAND FORKS DISTRICT MEDICAL SOCIETY

PRESIDENT
Gislason, G. J.....Grand Forks

SECRETARY
Friesen, H. J.....Grand Forks

Arneberg, J. G.....Grand Forks
Aylen, C. P.....Drayton
Beek, R. H.....Lakota
Bentzen, Olaf.....Grand Forks
Bratrud, A. S.....Warren, Minn.
Burrows, F. N.....Bathgate
Callerstrom, G. W.....Norwood
Cooperman, H.....Minto
Dean, Alfred.....Grand Forks
Deason, F. W.....St. Thomas
Eggers, Aug.....Grand Forks
Emert, H. F.....Sarles
Engstad, J. E.....Grand Forks
Field, A. B.....Forest River
French, H. E.....University
Friesen, H. J.....Grand Forks
Galbraith, J. E.....Cavalier
Gislason, G. J.....Grand Forks
Glaspel, G. W.....Grafton
Grassick, Jas.....Grand Forks
Harris, C. B.....Pembina
Healy, H. H.....Grand Forks
Hetherington, J. E.....Grand Forks
Irby, M. R.....Lankin
Irwin, S. H.....Grand Forks
Jelstrup, Christian.....Petersburg
Johnson, J. A.....Grand Forks
Kirkham, J. H.....Langdon
Landry, L. H.....Walhalla
Law, H. W. F.....Grand Forks
Law, I. M.....Hanna
Lommen, C. E.....Fordville
McLean, R. M.....Gilby
McQueen, W. W.....Langdon
Marsden, C. S.....Grand Forks
Meland, O. N.....Warren, Minn.
Mulligan, T.....Grand Forks
O'Keefe, Henry.....Grand Forks
Peterson, O. T.....Northwood
Porter, W. H.....Calvin
Scott, R. A.....Crystal
Smith, J. C.....Thompson
Spanore, C. I.....Milton
Stromberg, G. E.....Langdon
Suter, J. C.....Grafton
Taylor, J. D.....Grand Forks
Thompson, A. Y.....Larimore
Towey, J. W.....Langdon
Waas, Chas.....Neche
Wagar, W. D.....Michigan
Waldren, H. M.....Drayton
Weed, F. E.....Park River
Welch, W. H.....Larimore
Westeen, A. A.....Grand Forks
Wheeler, H. M.....Grand Forks
Williamson, G. M.....Grand Forks
Wilson, W. C.....Grand Forks
Witherstine, W. H.....Grand Forks
Woutat, H. G.....Grand Forks
Wylie, A. R. T.....Grafton

KOTANA MEDICAL SOCIETY

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Trainor, M. E.....Williston

SECRETARY
MacManus, F. W.....Williston

Abplanalp, I. S.....Ray
Distad, O. E.....Williston
Dochterman, L. B.....Williston
Hagen, E. J.....Williston
Jones, C. S.....Williston
Linsin, I. M.....Tioga
MacManus, F. W.....Williston
Norris, J. L.....Westby, Mont.
Scott, W. B.....Ray
Steele, E. G.....Williston
Trainor, M. E.....Williston
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NORTHWESTERN DISTRICT MEDICAL SOCIETY

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Nestos, P. A.....Minot

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Allen, R. W.....Towner
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Blatherwick, W. E.....Van Hook
Brigham, F. O.....Stanley
Brugman, F. A.....Minot
Carr, Andrew.....Minot
Carter, P. S.....Parshall
Christie, F. J.....Deering
Coffin, G. H.....Drake
Collison, H. M.....Rugby
Craise, O. S.....Towner
Critchfield, L. R.....Kenmare
Griffin, J. H.....Ryder
Devine, J. L.....Minot
Doe, A. L.....Bowbells
Durnin, G. A.....Bottineau
Erenfeld, H. M.....Minot
Ewing, F.....Kenmare
Ewing, John.....Kenmare
Fisk, D. A.....Kenmare
Fitzmaurice, E. S.....Mohall
Flath, Milford G.....Stanley
Grangaard, H. O.....Douglas
Grogan, J. B.....Flaxton
Halliday, John .....Mohall
Halverson, H. L.....Des Lacs
Hanson, G. C.....Minot
Irvine, V. S.....Bantry
Johns, S. M.....Velva
Johnson, J. A.....Bottineau
Kermott, L. H.....Minot
King, C. J.....Columbus
Knapp, H. G.....Minot
Kolb, F. A.....Granville
Lancaster, Blake .....Crosby
McCannel, Archie D.....Minot
McCannel, A. J.....Minot
McKay, A. R.....Bottineau
Moffatt, Geo.....Donnybrook
Moreland, J. W.....Maxbass
Nestos, P. A.....Minot
Newlove, J. T.....Minot
Nicholson, A. S.....Williston
Overgard, S .....Minot
Paulson, A. J.....
.....Thief River Falls, Minn.
Pence, J. R.....Minot
Pence, R. W.....Minot
Pierson, C. M.....Ambrose
Plourde, W. A.....Willow City
Pressler, H. M.....Anamoose
Ransom, E. M.....Minot
Ray, R. H.....Garrison
Ringo, G. R.....Minot
Ritchie, C. K.....Velva
Rogers, Joseph .....Alexander
Rollefson, C. O.....Ambrose
Rudel, G. L.....Plaza
Rystad, O. H.....Landa
Semple, James.....Minot
Smith, J. A.....Noonan
Somers, A. J.....Portal
Steeves, E. O.....Rugby
Stone, E. C.....Balfour
Walker, A. J.....Dogden
Wheelon, F. E.....Minot

RICHLAND COUNTY MEDICAL SOCIETY

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Wiig, I. C. J.....Wahpeton

SECRETARY
O'Brien, T.....Wahpeton

Bean, O. G.....Walcott
Christensen, W. .....Lidgerwood
Cross, Irving J.....Wahpeton
Durkee, C. A.....Abercombie
Greenman, N. H.....Fairmont
Ivers, M. U.....Christine
Jacobs, G. C.....Wahpeton
McDonnell, R. H.....Hankinson
O'Brien, T.....Wahpeton
Ripperton, Sherman...Wyndmere
Ryan, D. E.....Hankinson
Sasse, E. G.....Lidgerwood
Steele, D. C.....Fairmount
Wiig, I. C. J.....Wahpeton

SHEYENNE VALLEY MEDICAL SOCIETY

PRESIDENT
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SECRETARY
Zimmerman, S. A....Valley City

Almklov, Lief .....Cooperstown
Benson, R. D.....Hannaford
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Lang, A. A. J.....Sanborn
LeBien, E. A.....McHenry
Lewis, T. H.....Sutton
MacDonald, A. C.....Valley City
MacDonald, A. W.....Valley City
Meadows, R. U.....Sheyenne
Nesse, S. A.....Nome
Pray, E. A.....Valley City
Platou, L.....Litchville
Spicer, C. E.....Valley City
Stixrud, T. M.....Litchville
Truscott, J. R.....Binford
VanHouten, J.....Valley City
Wanner, W. B.....Wimbledon
Westley, M. D.....Cooperstown
Wicks F. L.....Valley City
Zimmerman, S. A.....Valley City

SIXTH DISTRICT MEDICAL SOCIETY

PRESIDENT
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SECRETARY
Schipfer, L. A.....Bismarck

Ackerman, Emma M.....Bismarck
Altnow, H. O.....Mandan
Baer, DeWitt .....Braddock
Barrette, J. H.....Driscoll
Bodenstab, W. H.....Bismarck
Brandes, H. A.....Bismarck
Brandt, A. M.....Bismarck
Bunting, F. E.....Mandan
Cain, W. T.....Underwood
Fisher, A. M.....Bismarck
Fisher, Stephen.....New Salem
Forbes, C. G.....Washburn
Gaebe, E. C.....Halliday
Gaebe, O. C.....New Salem
Gordon, W. L.....Washburn
Griebenow, F. F.....Bismarck
Hamilton, E. E.....New Leipzig
Heinzeroth, G. E.....Turtle Lake
Kranz, M.....Mandan
Larabee, S. G.....Mandan
LaRose, V. J.....Bismarck
Leavitt, R. H.....Carson
Lipp, G. R.....Bismarck
Lodge, F. B.....Steele
McReynolds, C. E.....Glen Ullin
Mathews, G. A.....Napoleon
Miller, J. P.....Mandan
Plassman, W. F..Golden Valley
Pryse, T. S.....Dawson
Quain, E. P.....Bismarck
Ramstad, N. O.....Bismarck
Rasmusson, F. P.....Center
Roan, M. W.....Bismarck
Ruediger, E. H.....Bismarck
Schipfer, L. A.....Bismarck
Smith, C. C.....Stanton
Shoregge, C. W.....Bismarck
Shortridge, W. R.....Flasher
Smyth, F. R.....Bismarck
Spielman, G. H.....Mandan
Stackhouse, C. E.....Bismarck
Strauss, F. B.....Bismarck
Stucke, Agnes G.....Garrison
Stucke, E. C.....Garrison
Thelen, W. P.....Wilton
Thompson, R. C.....Wilton
Timm, J. F.....Makoti
Winchester, H. E.....Hazelton
Wolverton, W. C.....Linton

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SECRETARY
Plane, J. F.....Edgeley

Brenkle, J. F.....Kulm
Campbell, C. C.....Ashley
Emanuel, H. W.....Milnor
Grace, J. B.....Zeeland
Grant, Geo.....Wishek
Greene, L. B.....Edgeley
Gunderman, H. R.....Monango
Lyle, W. D.....Havana
Maercklein, F. W.....Oakes
Miracle, M. W.....Edgeley
Movius, H. J.....Edgeley
Munier, H. J.....Oakes
Plane, J. F.....Edgeley
Ribble, Geo. B.....LaMoure
Sante, Le Roy.....Ellendale
Sturgeon, F. H.....Kulm
Wentz, H. B.....Verona

SOUTHWESTERN DISTRICT MEDICAL SOCIETY

PRESIDENT
Schneider, J. E.....Bowman

SECRETARY
Whittemore, A. A.....Bowman

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Dach, J. L.....Reeder
Ewbank, J. Nelson.....Rhame
Hill, Simon W.....Regent
Johns, John G.....Hettinger
Maercklein, C. J. ..... Beach
Nutting, W. W.... .....Bowman
Sarchett, G. A.....New England
Schneider, J. E.....Bowman
Schumacher, N. W.....Hettinger
Voss, Carl .....Hettinger
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STARK COUNTY MEDICAL SOCIETY

PRESIDENT
Spear, A. E.....Belfield

SECRETARY
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Bowen, J. W.....Dickinson
Chernausek, S. .....Dickinson
Crossette, G. D.....Richardton
Dahl, P. K.....Belfield
Kamman, H. F.....Taylor
Long, W. H.....Dickinson
Maercklein, O. C.....Mott
Museus, H. B.....Beach
Nachtwey, A. P.....Dickinson
Perkins, George A.....Dickinson
Schierbaum, A. F. E.....Hebron
Smith, Oscar M.....Killdeer
Spear, A. E.....Belfield
Stickney, V. H.....Dickinson

STUTSMAN COUNTY MEDICAL SOCIETY

PRESIDENT
Buzzell, Chas. P.....Cleveland

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Golseth, G. .....Jamestown

Arzt, P. G.....Jamestown
Culbert, M. H.....Courtenay
Buzzell, C. P.....Cleveland
De Puy, R. G.....Jamestown
De Puy, T. L.....Jamestown
Earl, H. D.....Jamestown
Gerrish, W. A.....Jamestown
Golseth, G. .....Jamestown
Guest. A. W.....Jamestown
Hotchkiss, W. M.....Jamestown
Longstreth, W. E.....Kensal
Melzer, S. W.....Woodworth
Movius, A. H.....Jamestown
Nolte, W. C.....Jamestown
Smith, Le Roy G.....Medina
Treat, A. M.....Pingree
Whitson, J. S.....Streeter
Wink, Helen K.....Jamestown
Wood, W. W.....Jamestown

TRAILL-STEELE MEDICAL SOCIETY

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SECRETARY
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Heimark, A. J.....Finley
Hjelle, C. A.....Clifford
Kjelland, A. A.....Hatton
Knutson, O. A.....Buxton
Martin, Thomas P.....Mayville
Savre, M. T.....Northwood
Vinje, Syver .....Hillsboro
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TRI-COUNTY MEDICAL SOCIETY

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SECRETARY
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Brown, Fred.....McClusky
Clark, I. D.....Harvey
Clay, A. J.....Bowdon
Crawford, John..New Rockford
Donker, A. E.....Sykeston
Goss, E. L.....Carrington
Graham, M. P...Aberdeen, Wash.
MacKenzie, J. Ross...Carrington
MacKenzie, J. Roy, New Rockford
MacLachlan, Chas..New Rockford
McClusky, O. W.....Carrington
Matthaei, D. W.....Carrington
Moore, W. H.....Luverne
Olson, O. A.....Oberon
Owen, W. R.....Manfred
Owenson, H. A.....Grace City
Rankin, J. A.....Carrington
Swartout, E. F.....Sykeston

ALPHABETICAL ROSTER

Aaker, A. O.....Velva
Ackerman, Emma M.....Bismarck
Allen, R. W.....Towner
Almklov, Lief.....Cooperstown
Abplanalp, I. S.....Ray
Altnow, H. O.....Mandan
Anderson, C. O.....Willow City
Arneberg, J. G.....Grand Forks
Arneson, A. O.....McVille
Arzt, P. G.....Jamestown
Awty, Wm.....Fargo
Aylen, C. P.....Drayton
Aylen, J. P.....Fargo
Bacharach, H.....Bucyrus
Baer, DeWitt .....Braddock
Bailey, Fred H.....Fargo
Baillie, W. F.....Hunter
Baldwin, Wm. P.....Casselton
Bakkie, Hans.....Lisbon
Barrette, J. H.....Driscoll
Barton, W. C.....Belcourt
Bean, O. G.....Walcott
Beek, R. H. .....Lakota
Begtrup, O. N.....Rugby
Bennett, C. E.....Aneta
Benson, R. D.....Hannaford
Benson, O. T.....Glen Ullin
Blatherwick, W. E.....Van Hook
Bodenstab, W. H.....Bismarck
Bowen, J. W.....Dickinson
Brandes, H. A.....Bismarck
Brandt, A. M.....Bismarck
Bratrud, A. S.....Warren, Minn.
Brenkle, J. F.....Kulm
Brigham, F. O.....Stanley
Brimi, C. L.....Cooperstown
Brown, Fred.....McClusky
Brugman, F. A.....Minot
Bunting, F. E.....Mandan
Burrows, F. N.....Bathgate
Burton, P. H.....Fargo
Buzzell, C. P.....Cleveland
Cain, W. T.....Underwood
Call, A. M.....Rugby
Callander, C. N.....Fargo
Callerstrom, G. W.....Norwood
Campbell, C. C.....Ashley
Carpenter, Geo. A.....Fargo
Carr, Andrew.....Minot
Carter, J. A.....Warwick
Carter, P. S.....Parshall
Chernausek, Sam.....Dickinson
Christensen, W. .....Lidgerwood
Christie, F. J.....Deering
Clark, Horace.....Wheatland
Clark, I. D.....Harvey
Clay, A. J.....Bowdon
Clavbough, W. R.....Glenora
Collison, H. M.....Rugby
Coffin, G. H.....Drake
Callestrom, G. W...Northwood
Cooperman, H. O.....Minto
Craise, O. S.....Towner
Crawford, John..New Rockford
Critchfield, L. R.....Kenmare
Cross, Irving J.....Wahpeton
Crosby, E. B.....Oriska
Crossette, G. D.....Richardton
Culbert, M. H.....Courtenay
Cuthbert, W. H.....Crary
Dach, J. L.....Reeder
Dahl, P. K.....Belfield
Darrow, E. M.....Fargo
Darrow, Kent E.....Fargo
Dean, Alfred.....Grand Forks
Deason, F. W.....St. Thomas
De Puy, R. G.....Jamestown
De Puy, T. L.....Jamestown
Devine, J. L.....Minot
Distad, O. E.....Williston
Dochterman, L. B.....Williston
Doe, A. L.....Bowbells
Donker, A. E.....Sykeston
Drew, G. F.....Devils Lake
Durkee, C. A.....Abercombie
Durnin, G. A.....Bottineau
Earl, H. D.....Jamestown
Eggers, Aug.....Grand Forks
Emanuel, H. W.....Milnor
Emert, H. F.....Sarles
Engesather, A. D.....Brockett
Engstad, J. E.....Grand Forks
Erenfeld, H. M.....Minot
Ewbank, J. Nelson.... ...Rhame
Ewing, F.....Kenmare
Ewing, John.....Kenmare
Fawcett, W. C.....Starkweather
Field, A. B.....Forest River
Fisher, A. M.....Bismarck
Fisher, Stephen.....New Salem
Fisk, D. A.....Kenmare
Fitzmaurice, E. S.....Mohall
Flath, Milford G.....Stanley
Floew, A. T.....Harvey
Forbes, C. G.....Washburn
Fortun, O. J.....Mayville
French, H. E.....University
Friesen, H. J.....Grand Forks
Frogner, G. S.....Mayville
Gaebe, E. C.....Halliday
Gaebe, O. C.....New Salem
Galbraith, J. E.....Cavalier
Gerrish, W. A.....Jamestown
Gislason, G. J.....Grand Forks
Glaspel, G. W.....Grafton
Glasscock, T. J.....Finley
Golseth, G. .....Jamestown
Gordon, W. L.....Washburn
Goss, E. L.....Carrington
Grace, J. B.....Zeeland
Graham, M. P...Aberdeen, Wash.
Grangaard, H. O.....Douglas
Grant, Geo.....Wishek
Grassick, Jas.....Grand Forks
Greene, L. B.....Edgeley
Greenman, N. H.....Fairmont
Griebenow, F. F.....Bismarck
Griffin, J. H.....Ryder
Grogan, J. B.....Flaxton
Gronvold, F. O.....Fargo
Guest, A. W.....Jamestown
Gullaume, Wm..... ....St. John
Gunderman, H. R.....Monango
Hagen, E. J.....Williston
Halliday, John .....Mohall
Halverson, H. L.....Des Lacs
Hamilton, E. E.....New Leipzig
Hamilton, J. S.....Bathgate
Hanna, J. F.....Fargo
Hanson, G. C.....Minot
Harris, C. B.....Pembina
Hayhurst, J. O.....Rollette
Healy, H. H.....Grand Forks
Heimark, A. J.....Finley
Heinzeroth, G. E.....Turtle Lake
Hetherington, J. E...Grand Forks
Hill, Simon W.....Regent
Hjelle, C. A.....Clifford
Horsman, A. T.....Devils Lake
Hotchkiss, W. M.....Jamestown
Huntley, H. B.....Leonard
Irby, M. R.....Lankin
Irwin, S. H.....Grand Forks
Irvine, V. S.....Bantry
Ivers, M. U.....Christine
Jacobs, G. C.....Wahpeton
Jamieson, G. V.....
Jelstrup, Christian....Petersburg
Johns, John G.....Hettinger
Johns, S. M.....Velva
Johnson, J. A.....Bottineau
Johnson, J. A.....Grand Forks
Jones, C. S.....Williston
Jones, W. D.....Devils Lake
Kachelmacher, C.....Fargo
Kamman, H. F.....Taylor
Kermott, L. H.....Minot
King, C. J.....Columbus
Kirkham, J. H.....Langdon
Kjelland, A. A.....Hatton
Knapp, H. G.....Minot
Knutson, O. A.....Buxton
Kolb, F. A.....Granville
Kranz, M.....Mandan
Labbitt, L. H.....Enderlin
Lamont, J. G.....Dunseith
Lancaster, Blake.....Crosby
Landry, L. H.....Walhalla
Lang, A. A. J.....Sanborn
Larabee, S. G.....Mandan
LaRose, V. J.....Bismarck
Law, I. M.....Hanna
Law, H. W. F.....Grand Forks
Leavitt, R. H.....Carson
LeBien, E. A.....McHenry
Lemieux, D.....Dunseith
Lewis, T. H.....Sutton
Linsin, I. M.....Tioga
Lipp, G. R.....Bismarck
Lodge, F. B.....Steele
Lohrbauer, Ejner.....Lakota
Lommen, C. E.....Fordville
Long, W. H.....Dickinson
Longstreth, W. E.....Kensal
Lyle, W. D.....Havana
MacDonald, A. C.....Valley City
MacDonald, A. W.....Valley City
MacGregor, Murdock.....Fargo

MacKenzie, J. Ross...Carrington
MacKenzie, J. Roy, New Rockford
MacLachlan, Chas..New Rockford
MacLachlan, T. M.....Bismarck
MacManus, F. W.....Williston
McCannel, Archie D.....Minot
McCannel, A. J.....Minot
McClusgy, O. W.....Carrington
McDonnell, R. H.....Hankinson
McGurren, C. J.....Devils Lake
McIntosh, G. J.....Devils Lake
McKay, A. R.....Bottineau
McLean, R. M.....Gilby
McMurtry, W. C.....Wolford
McQueen, W. W.....Langdon
McReynolds, C. E.....Glen Ullin
Maercklein, C. J.....Beach
Maercklein, F. W.....Oakes
Maercklein, O. C.....Mott
Marsden, C. S.....Grand Forks
Martin, Thomas P.....Mayville
Mathews, G. A.....Napoleon
Matthaei, D. W.....Carrington
Meadows, R. U.....Sheyenne
Meland, O. N....Warren, Minn.
Mel er, S W.....Woodworth
Miller, H. W.....Casselton
Miller, Hugo.....Harvey
Miller, J. P.....Mandan
Miracle, M. W.....Edgeley
Moeller, Thor .....Devils Lake
Moffatt, Geo.....Donnybrook
Moore, W. H.....Luverne
Moreland, J. W.....Maxbass
Morris, A. C.....Fargo
Movius, A. H.....Jamestown
Movius, H. J.....Edgeley
Mulligan, T.....Grand Forks
Munier, H. J.....Oakes
Museus, H. B.....Beach
Nachtwey, A. P.....Dickinson
Nelson, W. P.....Knox
Nesse, S. A.....Nome
Nestos, P. A.....Minot
Newlove, J. T.....Minot
Nichols, A. A.....Fargo
Nicholson, E. G.....Lawton
Nichols, Wm. C.....Fargo
Nicholson, A. S.....Williston
Niles, C. N.....Cathay
Nolte, W. C.....Jamestown
Norris, J. L.....Westby, Mont.
Nugent, O. B.....Minot
Nutting, W. W.....Bowman
Nygard, G. .....Luverne
O'Brien, T.....Wahpeton
O'Keefe, Henry.....Grand Forks
Oftedahl, Arne.....Fargo
Oftedal, Sverre.....Fargo
Olson, O. A.....Oberon
Overgard, S .....Minot
Owen, W. R.....Manfred
Owenson, H. A.....Grace City
Patterson, A. G..... ..Lisbon
Patterson, T. C.....Lisbon
Paulson, A. J.
Thief River Falls, Minn.
Pence, J. R.....Minot
Pence, R. W.....Minot
Perkins, Geo. A.....Dickinson
Peterson, O. T.....Northwood
Pierson, C. M.....Ambrose
Plane, J. F.....Edgeley
Plassman, W. F..Golden Valley
Platou, L. S.....Fargo
Platou, L.....Litchville
Plourde, W. A.....Willow City
Porter, W. H.....Calvin
Pray, E. A.....Valley City
Pressler, H. M.....Anamoose
Pryse, T. S.....Dawson
Quain, E. P.....Bismarck
Ramstad, N. O.....Bismarck
Rankin, J. A.....Carrington
Ransom, E. M.....Minot
Rasmusson, F. P.....Center
Ray, R. H.....Garrison
Ribble, George B.....La Moure
Rindlaub, Elizabeth P.....Fargo
Rindlaub, John H.....Fargo
Rindlaub, M. P.....Fargo
Ringo, G. R.....Minot
Ripperton, Sherman...Wyndmere
Ritchie, C. K.....Velva
Roan, M. W.....Bismarck
Roberts, F. J.....Cando
Rogers, Joseph .....Alexander
Rollefson, C. O.....Ambrose
Rowe, H. J.....Lisbon
Rudel, G. L.....Plaza
Ruediger, E. H.....Bismarck
Ryan, D. E.....Hankinson
Rystad, O. H.....Landa
Sand, S. O.....Fargo
Sante, Le Roy.....Ellendale
Sarchett, G. A.....New England
Sasse, E. G.....Lidgerwood
Savre, M. T. .....Northwood
Schierbaum, A. F. E.....Hebron
Schipfer, L. A.....Bismarck
Schneider, J. E.....Bowman
Schumacher, N. W.....Hettinger
Scott, R. A.....Crystal
Scott, W. B.....Ray
Shoregge, C. W.....Bismarck
Shortridge, W. R.....Flasher
Semple, James.....Minot
Sihler, W. F.....Devils Lake
Skelsey, A. W.....Fargo
Smith, C. C.....Stanton
Smith, Clinton.....Devils Lake
Smith, J. A.....Noonan
Smith, J. C.....Thompson
Smith, Le Roy G.....Medina
Smith, Oscar M.....Killdeer
Smyth, F. R.....Bismarck
Somers, A. J.....Portal
Sorenson, A. R.....Rugby
Sorkness, Paul.....Fargo
Spanore, C. I.....Milton
Spear, A. E.....Belfield
Spicer, C. E.....Valley City
Spielman, G. H.....Mandan
Stackhouse, C. E.....Bismarck
Steele, D. C.....Fairmount
Steele, E. G.....Williston
Steeves, E. O.....Rugby
Stixrud, T. M.....Litchville
Stone, E. C.....Balfour
Strauss, F. B.....Bismarck
Stromberg, G. E.....Langdon
Stucke, Agnes G.....Garrison
Stucke, E. C.....Garrison
Sturgeon, F. H.....Kulm
Suter, J. C.....Grafton
Swartout, E F.....Sykeston
Swenson, A. W.....Bisbee
Taylor, J. D.....Grand Forks
Thelen, W. P.....Wilton
Thompson, A. Y.....Larimore
Thompson, R. C.....Wilton
Timm, J. F.....Makoti
Towey, J. W.....Langdon
Trainor, M. E.....Williston
Treat, A. M.....Pingree
Tronnes, N. .....Fargo
Truscott, J. R.....Binford
Van Houten, J.....Valley City
Verrett, B. D.....Rolla
Vigeland, J. C.....Brinsmade
Vinje, Syver .....Hillsboro
Voss, Carl.....Hettinger
Waas, Chas.....Neche
Wadel, K. A.....Portland
Wagar, W. D.....Michigan
Waldren, H. M.....Drayton
Walker, A. J.....Dogden
Wands, E. E.....Lisbon
Wanner, W. B.....Wimbledon
Warren, J. W.....Leeds
Weed, F. E.....Park River
Weible, R. E.....Fargo
Welch, W. H.....Larimore
Wentz, H. B.....Verona
Westley, M. D.....Cooperstown
Westeen, A. A.....Grand Forks
Wheeler, H. M.....Grand Forks
Wheelon, F. E.....Minot
Whitson, J. S.....Streeter
Whittemore, Arthur A..Bowman
Wicklund, C. A.....Wildrose
Wicks, F. L.....Valley City
Wiig, I. C. J.....Wahpeton
Williamson, Geo. M.Grand Forks
Wilson, W. C.....Grand Forks
Winchester, H. E.....Hazelton
Windel, H. C.....Williston
Wink, Helen K.....Jamestown
Witherstine, W. H....Grand Forks
Wolverton, W. C.....Linton
Wood, W. W.....Jamestown
Wontat, H. G.....Grand Forks
Wylie, A. R. T.....Grafton
Zimmerman, S. A....Valley City

THE
JOURNAL-LANCET
Represents the Medical Profession of
Minnesota, North Dakota, South Dakota and Montana
The Official Journal of the
North Dakota and South Dakota State Medical Associations

W. A. JONES, M. D., EDITOR

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SEPTEMBER 1, 1919

THE NORTH DAKOTA STATE MEDICAL ASSOCIATION

We give practically all of this issue to the transactions of the recent annual meeting of the North Dakota State Medical Association, and we hope that, at least, some of the work done by this live association will be thoroughly considered by other Western associations. The provision for a referendum vote is especially worthy of commendation. Some years ago when it was found that the business matters of an association could not wisely be left to the general meeting, principally because of the time wasted, a House of Delegates and a Council were established to transact the business of the association; and this plan has worked admirably with two notable and dangerous exceptions. It has enabled—perhaps the truth would justify the statement that it has compelled—a few men to carry on the business of the association, the same men being the active workers year after year, thus diminishing, if not killing, the interest of many members in the association because of unfamiliarity with its work. It has also enabled a few men to control the action of the association in the interests of themselves by the introduction of political methods in the House of Delegates.

The foundation for these two statements is found in the usual attendance at meetings of the House of Delegates, which attendance runs from 2 to 5 per cent of the total membership, and were it much in excess of this, the same faults would be inherent in the plan. The referendum is a cure, in a measure, for the loss of interest on the part of many members, and can be made a check on offensive political methods.

The North Dakota Association also adopted the plan of the A. M. A. for choosing a president-elect a year in advance of his term of service, which time permits him to make his plans for aggressive work during his active term of office.

The provision for associate membership for teachers in medical and other schools is well worth consideration, especially by the Minnesota Association.

Other work of the North Dakota Association shows that there are live men in that state.

NEWS ITEMS

Dr. Josephine Tofte has moved from Pine City to Minneapolis.

Dr. E. L. Armstrong has moved from Park Rapids to Wayzata.

Dr. H. T. Irvine has moved from Russell, N. D., to Fingal, N. D.

Dr. Thor Moeller, of Devils Lake, N. D., is home from army service.

The budget of the University Medical School for 1919-20 is $195,000.

Dr. F. M. Kjerland has moved from Webster, S. D., to Northwood, Iowa.

Dr. J. A. Kittleson, formerly of Lowry, has located permanently at Starbuck.

Dr. A. V. Denham has resumed practice in Mankato after a year's absence in France.

The Goodhue County Medical Society held its midsummer meeting at Goodhue last month.

Dr. J. W. Powell, of Sisseton, S. D., is building a hospital with a capacity of fifteen patients.

Dr. Carl Voss, of Hettinger, N. D., is home from army service. He was in the service over two years.

Dr. M. C. Welch, of St. Paul, who spent the last year of his army service in France, has returned home.

Dr. O. N. Meland, of Warren, has returned from two years' war service, and has resumed practice in Warren.

Dr. Milton P. Graham, of Carrington, N. D., who recently returned from France, has located in Aberdeen, Wash.

The St. Louis County Medical Society and the Women's Auxiliary held their annual picnic last month at Nopeming.

Dr. B. W. Jarvis, who is associated with Dr. W. A. Jones, of Minneapolis, has moved from St. Paul to Minneapolis.

Dr. Karl Dedolph, of St. Paul, has returned from a year and a half in army service, and resumed practice in St. Paul.

Dr. Ione Pinney has resigned from the staff of the State Hospital at St. Peter, and will take up hospital work in Chicago.

Dr. H. L. Crane, of Lead, S. D., has returned from France, and has resumed his former work on the Homestake Hospital staff.

Dr. J. H. Drake has moved from Hardin, Mont., to Baudette, Minn., where he takes over the practice of Dr. B. F. Osborne.

Dr. J. H. Kirkham, who spent two years in the service, much of the time in France, has resumed practice at Langdon, N. D.

Dr. C. M. Adkins, of Grygla, has moved to Thief River Falls and formed a partnership with Dr. A. W. Swedenberg, of that place.

Dr. J. Fuller, who formerly practiced at Plaza, N. D., and has been doing postgraduate work in Chicago, has located in Bowbells, N. D.

Dr. N. T. Owens, who was formerly physician of the Homestake Mines, at Lead, S. D., has begun general practice in Rapid City, S. D.

The firm of Smith & Schumacher, of Hettinger, N. D., has been dissolved, but both physicians will continue to practice in Hettinger.

Dr. N. E. Mattox, of the staff of the Homestake Hospital of Lead, S. D., is spending his vacation at the Clinics of Rochester and Chicago.

Dr. John Perkins has moved from Redwood Falls to Sanborn, where he takes over the practice of Dr. M. C. Piper, who has moved to Rochester.

The editor of THE JOURNAL-LANCET will present a paper before the Washington State Medical Association which meets in Seattle the middle of this month.

Dr. B. F. Osborne has moved from Baudette to International Falls, where he becomes associated with Dr. C. C. Craig in the Northern Minnesota Hospital.

The Minnesota State Board of Health has recently had several physicians arrested for failure to report births within the ten-day period required by law.

Dr. A. G. Wiltrout, who recently returned from France, has purchased the practice of Dr. C. K. Onsgard, of Rushford. Dr. Onsgard may retire from practice.

The estate of the late Dr. Frank Todd, of Minneapolis, who died about a year ago at Camp Dodge, amounted to $419,171, and paid an inheritance tax of $10,351.

Dr. H. L. Saylor, who formerly practiced at Cogswell, N. D., and has been in charge of the practice of Dr. Beeson, at Forman, during the latter's absence, will locate in Aberdeen, S. D.

Dr. Harry B. Clark, who formerly practiced in Clear Lake, is home from army service, and has located in St. Cloud. Dr. Clark graduated from the University of Minnesota with the class of 1915.

Dr. I. J. Murphy, who specialized in *x*-ray work during his army service, is now associated with Dr. C. D. Harrington, of Minneapolis, who has done special work with the *x*-ray for a number of years.

Dr. C. E. King, for six years Professor of Physiology in the School of Medicine of the University of North Dakota, has recently resigned to go to a similar position in the University of Alabama.

Dr. H. O. Collins, formerly superintendent of the Minneapolis City Hospital, and for some months superintendent of the Winnipeg General Hospital, has been elected superintendent of the University of Iowa Hospital.

The Federal manager of the Iron Range Railroad (an iron-ore line) has increased the hospital assessment or fee of the men in the employ of the road from $1.50 to $2.00 a month for married men and from 75 cts. to $1.00 a month for single men.

Dr. R. H. Wald, of Hastings, has returned from army service. Dr. Wald served in England and France, and was near Metz when the armistice was signed. He attained the rank of major, and before returning did postgraduate work in London.

Dr. W. C. Burke, of Wykoff, was killed in an automobile accident last month. Dr. Burke was thirty years of age, and had practiced in St. Louis, Mo., where he graduated in medicine, and in Chatfield, Minn. He had practiced in Wykoff about a year.

The office of Dr. O. E. Nelson, of Minneapolis, was entered by thieves on August 14th, who carried off all his surgical instruments, valued at

$500. It was probably the work of dope fiends. This is the first loss of the kind in Minneapolis for many years.

Dr. W. J. Shaughnessy, of Wabasha, has sold his practice to Dr. Hugo Branyan, of Clyde, N. D. Dr. Shaughnessy goes to Framingham, Mass., to practice surgery exclusively. He will spend several months in postgraduate work in New York City.

Dr. B. A. Bobb, of Mitchell, S. D., has returned from France. Dr. Bobb was chief of the Surgical Service of Base Hospital No. 111, at Bordeaux for eight months. He resumes the practice of surgery as a member of the firm of Drs. Bobb & Bobb.

In the new constitution of the North Dakota State Medical Association, provision is made for electing a "president-elect" each year, thus giving this officer a year in which to prepare for his work before he becomes president. The plan is an admirable one, and follows that of the A. M. A.

The University Medical School has decided to limit the registration of the junior and senior students (fifth and sixth year classes) to 80 students in each class. As the entering class is limited to 90 students, this action may cut off, at an early day, the entrance of outside students into the fifth and sixth year classes.

Physicians who expect to attend the Minnesota State Medical Association on October 1, 2, and 3, cannot make their hotel reservations too soon. The hotels of the city are crowded all the time, and accommodations cannot be had at times. Write Dr. Hugh J. Tunstead, 1126 Metropolitan Bank Bldg., for the accommodations you want for any of the above dates.

In our last issue we gave, from memory, the Minnesota men who reached the rank of lieutenant-colonel in the war. Our attention has been called to two omissions from the list, the information, in each case, coming from a friend of the man whose name was omitted. The two physicians referred to are Dr. R. M. Pederson, of Minneapolis, and Dr. John C. Staley, of St. Paul. Are there others? If so, let their friends speak.

The following appointments have been made on the staff of the University Medical School: Dr. John L. Shellman as assistant in Ophthalmology and Otolaryngology; Dr. J. C. Brown as assistant in Ophthalmology and Otolaryngology; Dr. E. F. Robb as assistant in Pediatrics; Dr. C. A. McKinlay as assistant in Medicine; Dr. L. W. Barry for service at the City and County Hospital, St. Paul, and W. P. Shepard as admitting officer in the Outpatient Department.

The School of Medicine of the University of North Dakota announces the appointment of Dr. B. J. Clawson to be Professor of Pathology and Dr. A. D. Bush to be Professor of Physiology. Dr. Clawson had his training at the University of Kansas, the University of Chicago, and Rush Medical School; Dr. Bush at Tuft's, Emery University School of Medicine, and Harvard. The work of the State Public Health Laboratory will continue under the direction of Dr. A. G. Long.

PARTIAL PROGRAM OF THE ANNUAL MEETING OF THE MINNESOTA STATE MEDICAL ASSOCIATION

October 2-3, 1919

Surgical Section

1. Treatment of Tuberculosis of the Spine, Dr. W. W. Meyerding, Rochester. Discussion, Drs. Chatterton and Reed.
2. Prolapse of the Uterus, Dr. W. A. Coventry, Duluth. Discussion, Drs. MacLaren and J. L. Rothrock.
3. Cancer of the Thyroid, Dr. H. A. Bowman, Minneapolis.
4. Cholecystectomy, Dr. W. A. Dennis, St. Paul. Discussion, Drs. Johnston and Earl Hare.
5. The Correction of External Deformities of the Nose, Dr. J. P. Lewis, Minneapolis. Discussion, Drs. C. N. Spratt and Gordon B. New.
6. Nerve Surgery, Dr. J. F. Corbett, Minneapolis. A Diagnosis by Dr. A. S. Hamilton; Treatment by J. F. Corbett.
7. Paralysis of the Abducens Nerve Secondary to Mastoiditis, Dr. George Dittman, St. Paul. Discussion, Drs. H. L. Lillie and F. E. Burch.
8. A New Operation for Empyema, Dr. A. C. Strachauer, Minneapolis. Discussion. Drs. D. D. C. Balfour and L. E. Daugherty.
9. Tumors of the Great Omentum, Dr. A. L. McDonald. Discussion, Dr. W. C. MacCarthy.
10. War Wounds of the Major Joints, Dr. A. T. Law, Minneapolis. Discussion, John Staley and H. Zimmerman.
11. Surgical Treatment of Tri-Facial Neuralgia (Gasserian Ganglion), Dr. A. W. Adson, Rochester. Discussion, Drs. Chas. Ball and A. C. Strachauer.
12. Modern Aspects of Bone Surgery, Dr. A. T. Mann, Minneapolis.

Symposium on Renal Diseases

1. Recent Methods of Diagnosing Surgical Diseases of the Urinary Tract, Dr. L. W. F. Braasch, Rochester.
2. Surgical Indications for the Removal of the Kidney, Dr. Donald C. Balfour, Rochester.
3. Diagnosis from a Medical Point of View, Dr. L. G. Rowntree, Minneapolis.

4. Röntgenology of the Urinary Tract, Dr. F. S. Bissell, Minneapolis.
5. Discussion, Dr. Carman, Rochester.

H. P. Ritchie, M. D.,
Secretary.

Medical Section

1. Protein Sensitization in Asthma, Dr. A. H. Sanford, Rochester.
2. Influenza: Clinical and Pathological Observations, Dr. W. S. Lemmon, Rochester.
3. Auricular Fibrillation and Life Expectancy, Dr. F. A. Williams, Rochester.
4. Tuberculosis of the Thyroid, Dr. W. A. Plummer, Rochester.
5. Vertigo: The Delineation of Its Cause, Dr. J. A. Watson, Minneapolis.
6 Observations on Angina Pectoris, Dr. H. L. Staples, Minneapolis.
7. Blood-Transfusion: Indications and Methods, With Special Reference to the Sustaining Value of Repeated Blood-Transfusion in Pernicious Anemia, Dr. F. H. K. Schaaf, Minneapolis.
8. Cerebrospinal Fluid in Lues, Drs. Nixon and Warwick, Minneapolis.
9. Diabetes Insipidus, Dr. L. S. Rowntree, Minneapolis.
10. Methods of Handling Dermatological and Luetic Cases in the Dispensary, Drs. Butler, Irvine, and Schweitzer, Minneapolis.
11. Hypertension, Dr. F. J. Hirschboeck, Duluth.
12. Traumatic Nerve Lesions, Dr. C. R. Ball, St. Paul.

J. P. Schneider,
Secretary.

SURGICAL INSTRUMENTS, ETC., FOR SALE

A complete set of surgical instruments, a fine operating table, and an electric battery are offered for sale cheap. Address P. O. Box 23, Hazelton, N. D.

LOCUM TENENCY WANTED

A physician of experience who has been in war service and can give the best of references, desires temporary work as locum tenens. Licensed in Minnesota. Address 271, care of this office.

LOCUM TENENCY WANTED

A University of Minnesota senior desires work as locum tenens for the month of September. Has had three months' internship at University of Minnesota Hospital. Married; best of references. Address 269, care of this office.

ASSISTANT PHYSICIAN WANTED

Assistant physician for mining contract practice in Minnesota. Must be graduate of Class A college. Salary, $225 to start with. Early increase to the right man. Give full information in first letter, with photo. Address 270, care of this office.

POSITION AS OFFICE ASSISTANT TO PHYSICIAN OR DENTIST

A registered nurse with five years' experience desires a position as assistant to a surgeon or dentist. Address 275, care of this office.

PHYSICIAN WANTED

A physician is wanted to locate in a live town in North Dakota. Good schools and churches, electric lights, etc. Cost of living low. For particulars address, A. Stevenson, Secy. Commercial Club, Arthur, N. D.

POSITION AS TECHNICIAN WANTED

With a physician or a firm of physicians, or a clinic in or outside of the Twin Cities. Being a registered nurse, applicant can assist, when needed, in office operations. Address 277, care of this office.

PHYSICIAN WANTED AT ONCE

A good doctor is wanted to locate in a small Minnesota town, with the nearest doctor 20 miles away. Large surrounding territory. This is a splendid opening for a young man. Address Andrew W. Clay, Grygla, Minn.

APPARATUS FOR SALE CHEAP

On account of the death of Dr. Beil, I offer for sale at low price, the following: Static machine, galvanic, faradic, high frequency batteries and new *x*-ray tube and electric instruments—all in fine condition. Please make an offer. Mrs. A. Beil, Selby, S. D.

MANAGEMENT OF SANITARIUM OR HOTEL WANTED

If you need a good man who is able to handle all the business, write me. Twelve years' experience. Open for position after October 1st. Good salary will be asked. Would be interested in opening new location with investment. Address 263, care of this office.

POSITION WANTED AS WOMAN'S COMPANION

A woman (aged 34) desires a position as the companion of an elderly woman or an invalid, preferably in travel. Has had considerable experience in nursing, and is in excellent health. Can make herself useful in many ways. Only moderate salary expected. Address 278, care of this office.

HOSPITAL SUPERINTENDENCY WANTED

Wanted, a position as superintendent or assistant superintendent or manager of a hospital by a Hospital and Religious Work Secretary of the Army Y. M. C. A., who has been a year and a half in "Y" work at one of the larger general hospitals of the army. Is a college graduate and teacher, and otherwise well qualified. Knows how to handle people tactfully, and has the best of references. Address 273, care of this office.

PUBLISHER'S DEPARTMENT

THE H. A. METZ LABORATORIES

The name of "Metz" on a wrapper or package containing Salvarsan, Neosalvarsan, Novocaine, Anaesthesin, Pyramidon, and like standard products now in universal use by physicians, is a guarantee that the article is "sterling." In fact, no higher guarantee can be given with these preparations, and their great importance absolutely demands purity.

The Metz Laboratories are an American institution, and from them come nothing but the best, and with no profiteering prices tacked onto them.

THE WALMAN OPTICAL CO.

The above company prides itself on its quick and active prescription service for physicians who have optical work done from their prescriptions.

The company does an exclusively wholesale business in optical instruments and merchandise, and they invite orders from physicians in the city or in the country. They guarantee their work in every respect, and no one will long have cause to find fault with the filling of any order given them.

Prescription blanks and catalogues may be had by addressing the Walman Optical Co., Physicians and Surgeons' Building, Minneapolis.

THE HOLLISTER-WILSON LABORATORIES

These laboratories are conducted by one of the great packing establishments of Chicago, and they manufacture sutures, ligatures, and surgical material, besides digestive ferment, glandular substances and other products derived from the abbatoir. The material at hand is abundant, and the experts of the Laboratory and the equipment are not surpassed in either America or Europe.

The catalogue of this Laboratory is a mine of information upon the pharmaceuticals and other products of a great packing-house.

For the Company's catalogue address the Hollister-Wilson Laboratories, Chicago.

HORMOTONE

Hormotone is a pluriglandular preparation put up by one of the best pharmaceutical houses in the country, the G. W. Carnrick Co., a name that is an honored one in the medical profession.

This preparation gives immediate and very gratifying results in the menstrual and menopausal disorders, which are often so baffling to the physician.

A pluriglandular preparation made by chemists of unquestioned ability and integrity must commend itself to all physicians who have had any experience with the various glandular extracts that have produced excellent results little short of marvelous.

Hormotone literature should be read by every physician.

BETHESDA HOSPITAL, ST. PAUL

The medical men of St. Paul look upon Bethesda Hospital as one that is a great credit to the city. While conducted by a religious denomination, it is in no manner a denominational institution, beyond the fact that a denomination finds in this hospital an active, concrete means of service.

Bethesda is a down-town hospital in its location, and yet it is in a very quiet section of the city, at the corner of Ninth and Wacouta streets.

The hospital has an able staff of physicians, an efficient corps of nurses devoted to the interests of the hospital, and its rates are entirely reasonable.

Detailed information can be had concerning the hospital by addressing the Rev. J. A. Krantz, D. D., superintendent, St. Paul.

STANOLIND SURGICAL WAX

Surgical wax plays an important role in modern surgery of burns, wounds, and like lesions. Such lesions cannot be treated with anything that is not absolutely pure; and absolute purity of such a product is not either easily obtained or maintained. Nothing but the honor of the maker will guarantee it. Fortunately, the Standard Oil Company makes such a wax under the brand of "Stanolind," and the name and reputation of this great corporation is back of every package sent out by it.

Standard Petrolatum is another product of this company, and is made in five grades. The two products are to be commended to the profession.

KNOWING ONE'S TOOLS

Once upon a time a successful city doctor spent his vacation in a small village in the country. It happened that he was called in consultation by the country doctor, and in describing the incident at a later date, he paid a high compliment to the country doctor's practical knowledge of the action and effects of various agents.

For example, he said, the old doctor asked me if I had ever used Micajah's Wafers. I told him no. I had seen them advertised in my medical journal, but had never tried them. The old country doctor smiled rather condescendingly, I thought, and proceeded to give me the history of several cases, asking me what my method of treatment would have been in them.

I must confess that I probably did not make a very good showing. Then, he told me that in each one of these cases, he had used the Wafers successfully and satisfactorily. That set me to thinking. When I got back to town, I wrote for literature and samples. I read the first and tried the second. Now, I use Micajah's Wafers now and then in suitable cases with results that make me consider myself fortunate to have met that old country doctor, and to have learned something practical from him.

Micajah's Wafers and also Micajah's Suppositories have been used by physicians for over thirty years. Their value has been established.

Literature and samples will be sent to any physician on request to Micajah & Co., Warren, Pa.

THE VICTOR

The Victor Model "Snook" Roentgen Apparatus has given so general satisfaction that both the novice and the expert find it meeting their needs so fully that they want nothing else. The "Victor" stands with roentgenologists where the Pierce-Arrow stands with autoists. It is indeed a great machine, and no one need fear that after purchasing it he will feel that perhaps there is something better.

The Victor machine is sold in the Northwest by Mr.

F. Lorne Pengelly, who has extensive display rooms in the La Salle Building in Minneapolis, where physicians using electric apparatus like to visit, for they always find there much new information about things electrical, and always meet a warm reception.

RIVER PINES SANATARIUM FOR TUBERCULOSIS

We have often spoken in high terms of praise of the above institution, and we are sure no word of our praise has been an exaggeration. The institution is conducted in a manner not only to win praise for the outward appearance of things done, but to produce results. It is one of the few institutions for the care of the tuburculous where nothing in the power of the directors and attendants that will help their patients in body and mind is left undone.

River Pines is located at Stevens Point, Wis., and is an institution that is creditable to the state of Wisconsin and to the entire medical profession. It produces results that cannot be called temporary or artificial.

THE JORDAN SULPHUR SPRINGS AND MUD BATH SANITARIUM

The work done at Jordan, a railroad ride of a couple of hours from the Twin Cities, in a line of ailments that come from faulty metabolism, is too well established to be open to question.

The Jordan Sanitarium, under the management of Mr. J. J. Leonard for many years, is a thoroughly equipped institution for the care and treatment of patients, summer and winter; and very few patients fail to get decided, often astonishing, results from the baths and treatment.

The terms are moderate and the care of patients is most excellent.

Correspondence or visits from physicians are cordially invited. Address J. J. Leonard, Jordan, Minnesota, for all information desired.

A PHYSICIAN'S EXPERIENCE

The best all-around medicine for continuous and daily use, fool-proof and non-injurious, quick acting and soul-satisfying is a morning glass of Pluto Water, together with a glass of plain water at least fifteen minutes before breakfast, taking just enough to produce one daily stool, writes Dr. H. N. Jennett of Kansas City, Mo.

The absence of griping is a marked characteristic of Pluto Water. This is due to the fact that it acts as an intestinal bath rather than as an irritant of the mucosa, as characteristic of most cathartics and even calomel. The advantages of this kind of elimination are apparent, especially so when the continued use of laxatives becomes necessary.

The French Lick Springs Hotel Company at French Lick, Indiana, will be pleased to forward sample bottles at no expense to the medical profession—who are under no obligations whatsoever.

ANENT TYPHOID

There are said to be 20,000 typhoid carriers in the United States. Some of these, as shown by authentic records, have carried the germ for over fifty years. Four per cent of all convalescents become chronic typhoid carriers, and with 300,000 new cases each year it would seem that if anything the 20,000 figure is a low one.

The value of vaccines for prophylaxis against typhoid and paratyphoid infections is as firmly established as is vaccination against smallpox or the use of quinine in malaria.

Because of the publicity that has attended the practical eradication of typhoid from the armies the laity has been greatly and favorably impressed and the idea of prevention appeals strongly to the public mind. As the natural arbiter of such questions as the one of vaccination, the physician's field is a broad one and the time is especially opportune to greatly assist in the elimination of typhoid from community life.

This is the season of the year when so-called "vacation typhoid" is prevalent, much of which could have been prevented had proper prophylactic treatment been administered.

An interesting monograph on typhoid and typhoid mixed vaccines is being circulated by one of the large biological manufacturers—Eli Lilly & Company of Indianapolis. Its comprehensiveness will appeal to many of our readers interested in this subject, to whom it will be mailed on receipt of requests addressed to the Lilly Company.

ANASARCIN

The doctor who allows a case of dropsy or ascites to progress so far as to require tapping, has not paid due attention to the best interests of his patients. Ascites, or anasarca, means simply a collection of effused fluid in the tissues. Unless it has been neglected beyond any reasonable measure, such effused fluid can be made to be resorbed. Effusion of fluid results from circulatory stasis. This means that an increasing amount of labor is thrown upon the heart which is already unable to perform its full normal functions. It is poor therapy to attempt to cast resorption of effused fluid by the administration of mere diuretic agents. While the kidney should be stimulated to increase its function, the heart also should be stimulated and strengthened, and this without the production of vasar-motor constriction. In other words, the force-pump must be strengthened, and the kidneys made to join with the heart in bringing about not only resorption, but elimination of the effused fluid.

Anasarcin Tablets produce such action and effect. Anasarcin Tablets contain certain active principles of squill, together with other drugs of vegetable nature, which act upon the heart to strengthen and sustain it, while at the same time stimulating diuretic action of the kidney.

Anasarcin Tablets, when given properly, will relieve obstinate cases of anasarca, ascites, etc. Proof of this can be easily had by writing for samples and literature to the Anasarcin Chemical Co., Winchester, Tenn.

SALVARSAN
(ARSPHENAMINE-METZ)

	per ampule
0.1 gram	$ .60
0.2 "	.75
0.3 "	.85
0.4 "	1.00
0.5 "	1.25
0.6 "	1.50

NEOSALVARSAN
(NEOARSPHENAMINE-METZ)

	per ampule
Dosage I, 0.15 gram	$ .75
" II, 0.3 "	1.00
" III, 0.45 "	1.25
" IV, 0.6 "	1.50
" V, 0.75 "	1.75
" VI, 0.9 "	2.00

10% Discount in Cartons of Ten or More Ampules

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ANNUAL ADDRESS OF THE PRESIDENT OF THE NORTH DAKOTA STATE MEDICAL ASSOCIATION*

BY E. A. PRAY, M.D.
VALLEY CITY, NORTH DAKOTA

The past two Association years have witnessed great changes in the world's empires and kingdoms, in the attitude of the governed toward systems of government. From a state fairly pacific, the world has been plunged into a condition bordering on chaos. From a lesser nation the United States has taken her place as one of the greatest, and has changed from lassitude to energy and national virility, competing, more than ever before, with all other nations in economic world problems.

Americans have accomplished much, and we must pay for our achievement by added responsibility. No longer may we rest in satisfied peace. We must be ready to protect, to defend. Our former egotism and happy-go-lucky existence would be fatal. We must be up and doing. Those of us who have known North Dakota from territorial days remember the early freedom of the prairies, and compare the old North Dakota with the new North Dakota of today, regretting the pass to which we have come, so that, nationally and locally, we may well quote, "Turn back the universe and give us yesterday." But that cannot be, and it is now up to us, as thinking men, to meet our own peculiar problems for our own sake and for those who shall succeed us. The local condition in which we find ourselves is the outcome of former injustice where outside corporations gave the farmer no consideration. The early graft, the early dictation of prices, the arbitrary attitude assumed in such dictation, caused a state of dissatisfaction, which only awaited a leader to bring about socialistic unrest.

The tide has turned, and we are being carried to sea in a leaky boat which we must do our best to keep from being swamped by the waves of unscrupulous control. We are fighting for an existence, a respectable and decent living.

The dentists in this state have been licensed for years; the last legislature licensed the lawyers; and the Budget Committee intended doing the same for medical men, one member stating at the close, "We'll get the medical doctors next session." Prominent members of the Bar have told me that the law is unconstitutional, but that remains to be seen. I urge that a committee be appointed to confer with a like committee from the State Law and Dental Associations, looking toward the elimination of such infringement of professional rights. The organization of these three societies ought to exercise sufficient influence on each individual legislator to prevent our being classed with peddlers. There is very little dignity attached to the securing of such a license, and those of us who do not care to have a license should get busy, make our legislators promise that they will not submit us to such humiliation. As a profession we have been unselfish, doing at all times the things which would increase the health of the community, and decrease sickness and death. In spite of our willingness to work

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for the good of humanity we are looked upon with suspicion; and when a body of men representing the people of this state, go to the foolish extreme of extending to chiropractors the privileges they have, it is time we had a real organization, and, in conjunction with other professions, see to it that we get treatment to which we are entitled. We are informed that the British medical profession has joined with the labor party to protect itself. Some such measure may be worth considering in North Dakota.

The last legislature passed the Workmen's Compensation law that makes us realize the danger from accident to which our office girls, stenographers, and bookkeepers have been heretofore subject. This is distinct class legislation! The extrahazardous farm group exempted! This same legislature eliminated compulsory vaccination from our state requirements, and has done this without information and without good judgment. Our posterity will suffer. You will vaccinate your children and I mine, but the rank and file will go unvaccinated.

Governmental paternalism is not to be decried unless it reaches obnoxious extremes. Until now the powers have considered the health of the hog more than the health of the human. Our child death-rate is far greater than it should be, and will be under instruction. We have an illiterate population of 5,000,000. What can be of greater benefit than to educate generally and compulsorily, and then, with this increased information, will not the child mortality be lessened? If this education is demanded of the Government the demand will be met.

The Government has taken a step in advance in its venereal propaganda. Dr. Smyth has been made a representative of the Public Health Service, and his efforts in organization are making a decided impression. No matter how much has been done in establishing free-service clinics, the greater thing is education of the populace to the dangers, and the giving of full sexual information—anatomical and physiological. This can best be done by beginning with the child early in life, and making the teaching an evolution as part of its general acquirement of knowledge. The best instructor is the father for the son, and the mother for the daughter. The Father and Son Banquets are a great feature to be used as a means of getting together in this great problem. The Government found that out of the drafted men sent in without instruction, 41 per cent were in some measure not normal, and afterwards, where properly informed, this percentage was reduced to less than 4 per cent. This is a very convincing statement, and gives us the strongest evidence of the value of venereal and other necessary advance education. I contend that ignorance is responsible for a greater part of venereal errors. The child acquires improper habits from ignorance, and, while it can and should be made fully aware of the functions of the body, the instruction should include sex problems, as well. Dr. Smyth, at my request, appointed a venereal committee, but too late to be published in our program. I feel that he could well be consulted as to those who he thinks would best aid him in the work he is so enthusiastically directing.

While on the subject of sex, I wish that we, as an association and individual physicians, would use our influence to promote proper dancing. The recent tendency has been toward more and more questionable attitudes. The placing of cheek to cheek seems to be so apparent a risk that it should not need the warning of physicians to make the public realize the danger of infection.

Our State has done much for the cure and prevention of tuberculosis; but continually greater appropriations should be urged for this work. The greatest value of a sanatorium can be evolved only when its facilities are sufficient to enable those in charge to give such treatment as has been found most satisfactory.

In the recent war physicians and surgeons carried on, scientific technic and surgical dexterity have gone hand in hand. The human animal profited more, if life, per se, may be thought valuable, and we have heretofore so considered it. The charge d'affaires has been efficient and then inefficient; the older army, jealous of the new army; the established medical corps, critical of civilian acquisitions. Red tape has taken the field to the exclusion of snappy worth-while work. Men of routine have been oblivious of the energy of successful men from civil life. Lives have been lost, in their greatest efficiency to the nation, because of petty bickerings, and men of greatest ability have been relegated to inferior positions, the nation losing thereby the largest measure of result. Yet with it all, great gains have been obtained.

Men from our state—who have been in service, I congratulate you. The work you have done is known to us, your co-laborers in civil life. We are aware of your steadfastness and courage, and we know that your skill was carried with you, consequently only the best was to be ex-

pected; and that you gave. We wish specially to honor those who gave their lives, Dr. W. E. Cowper, of Michigan, and Dr. S. D. Henderson, of Lansford. We have reason to be proud of the record of North Dakota's medical men in this war.

You who, of necessity, kept the home fires burning, though desirous of more patriotic duties—I condole with you, while, in the same breath, I praise you. You did unheard-of work during the "flu" epidemic, trying to make up for the shortage of doctors and nurses. To those who died in this service, let us, as an association, give honor.

There is another group of men in our profession who deserve nothing but condemnation. I refer to those who appropriated fields to which some absent practitioners were entitled, and continue to hold the same. If a community were fair and just, the time of occupancy of these men would be limited to the moment of the others' return from service, but people, as a whole, are not subject to the expression of gratitude except as emotions are continuously agitated, and it is left to those men to do the honorable thing themselves, and this some of them are loath to do.

The work done by the Local and Advisory Boards was extremely proficient, and it is a matter of pride to us that, of the rejections at mobilization camps, North Dakota had the least, while some of the Southern states had as high as 14 per cent.

The American Medical Association has always done its utmost to put the profession of medicine on a higher plane, and it is sparing no expense for investigation of the value of all new medicinal preparations. In order to make a proper revenue for ethical publications they effected an advertising combination that enables a magazine to make a profit without being obliged to take questionable advertising. It is well for this Association to further the efforts of the American Medical Association in creating purer ethics in medical advertising.

The Government and State control of spirituous liquors has reached an extreme. My years of practice have taught me the value of these remedies, and I personally condemn the interdiction of any drug in the practice of medicine. I am not one to urge the use of liquor, but in certain extreme conditions I have found it invaluable.

The History Committee has only begun its work. This is an important matter, but it has been hard to find men willing to undertake the extra labor of collecting facts and statistics. Certain districts have been assigned, but others must be filled. A sufficient appropriation to carry on this work is advised.

I desire most to bring to your attention the need of fuller organization. There can no harm come from a co-operation that will enable us to accomplish more for the longevity of the human race. The greatest good to the largest number is our aim. Very few practitioners acquire a competence sufficient for support in old age. Every man among us makes it his whole effort to extend life and defer death.

If we can do the most good by closer association then let us work for such association without hesitation.

I would not urge a more intimate relation for financial reasons, but I do demand that we get together, do away with local strife, and work for humanity's uplift and a healthier and larger existence on earth.

LESSONS TO BE LEARNED FROM DRAFT EXAMINATIONS*

By F. A. Spafford, M.D.
FLANDREAU, SOUTH DAKOTA

Mr. President and Gentlemen: I have to apologize for allowing my name to appear on the program, because I have been unable to prepare the paper I desired to present along this line, consequently I thought I would avail myself of a little camouflage which Dr. Alway suggested to me, although it does not always conceal. I had in mind the preparation of a paper on this subject, and I thought it might be interesting to you to show the rejections by the different boards in the United States, which is really an estimate of the physical fitness of the men of the country.

You will remember that a large number of physicians present have been connected more or less with the selective-draft boards. I think in this state that the Medical Advisory Boards

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and the Local Examining Boards had more than 250 men connected with them. We had 65 Local Examining Boards in this state representing the different counties, and we also had 29 Medical Advisory Boards. You know, of course, the Local Examining Boards had original jurisdiction in these cases. After the first draft, in which South Dakota stood easily first, we at that time had, I think, 84.86 per cent of men that were found physically fit, which was several per cent over any other state. I think Nebraska came second with 79 per cent, and North Dakota next with 76 per cent and a mere fraction.

When it came to the second draft it was found there had been a large amount of material which might be used in the armies of the country that had gone to waste in the first draft; consequently they got together some of the wise men of the medical profession, representing the American Medical Association and the Council of National Defense, the medical side of it, and they conceived the idea of Medical Advisory Boards. The Medical Advisory Board, as it was originally intended, was really one of the finest institutions in connection with the selective-draft regulations, because it was presumed that these Medical Advisory Boards would consist of experts in the different departments. For instance, we would have an expert on the eye and ear, an expert neurologist or psychiatrist; we would have an expert in tuberculosis, and experts in various other diseases, so that if the examiner of the Local Board was unable to determine whether a man was physically fit for service or not, he could be sent to the Medical Advisory Board, which consisted entirely of experts. That worked out very nicely in eastern communities, but when it came to a state like South Dakota you could search this state over, and perhaps you would find three men who were experts on mental diseases. You could, perhaps, find in the state two or three men who were expert pathologists. Of course, you could find a large number of men who were experts on the eye and ear.

But this proposition of a board of experts fell to the ground so far as a state like South Dakota was concerned or any of the western states. The people soon realized that fact. I called to my assistance Dr. Alway, our secretary, and Dr. Jenkins, Superintendent of Public Health, because they had the records; and we organized and districted the state as best we could. There were sections west of the Missouri River where it was impossible to get men that were available at all. Take all the physicians, and you would not have men enough to form a Medical Advisory Board; and again you could not and would not be able to get a district where it was available to many of the registrants, so that we adopted a rule a man could go to the nearest Medical Advisory ory Board, if the local examiners saw fit to send him there. The "shoestring" district west of Chamberlain ran clear across nearly to Rapid City, back and forth; and yet, in all that district there were hardly any men available sufficient in number to form a Medical Advisory Board. Notwithstanding all that, the Medical Advisory Board of this state did excellent work, and the local examiners did excellent work, and I take this opportunity of thanking all you men who were connected with the different boards for the uniform courtesy which was extended to me in my capacity as Medical Aid to the Governor, and afterwards when I was placed in charge of the medical side of the draft in this state. I had a school of medical men connected with the draft up at Mowbridge, and there were men who left their practices and came in, having come a distance of several hundred miles and put themselves out, and we had an enjoyable time. We had a much larger meeting than we have now.

In the first draft of 1917 we stood at the head in the United States, having about 84.86 per cent of our men physically fit. In the second draft (I take these charts I have had prepared from the Provost-Marshal General's Office) you will see that South Dakota still stands in the first group. Now, there were under 13 per cent of the men in the states of Montana, Wyoming, South Dakota, Nebraska, Kansas, and Oklahoma, who were found physically unfit for full military service. I think that when you come to look up the exact percentage in these cases Oklahoma stands at the head, and I think South Dakota stands about third. North Dakota, you will notice, which stood easily third in the first draft, fell down to about seventh or eighth place. You can see from these charts what were the results in the United States in regard to these matters. Here is a peculiar thing about it. Here is the state of Washington, which has the lowest death-rate of any state in the Union, which stands at the bottom so far as physical efficiency is concerned. There is my old state of Vermont clear at the bottom. Michigan is near the bottom, and so are Colorado and Arizona; yet, as I have said, the state of Washington has the lowest death-rate of any state in the union.

In the first draft, let me go back, we stood

second in regard to having furnished the largest number of men by voluntary enlistment. Oregon stood first during the first draft. They had 16 counties that furnished their entire quota by a voluntary enlistment, while South Dakota stood second with, I think, 13 counties that furnished their entire quota by voluntary enlistment.

This chart I show you explains itself, so far as the different diseases for which rejections were made. We will take up alcohol and drug rejections, also the number rejected on account of diseased bones and joints, venereal diseases, heart and blood vessel diseases, mental deficiency, respiratory diseases tubercular in origin, the teeth, and then tuberculous diseases that are non-respiratory. The different letters on the charts are followed by the number in the different states which you can examine. Those of you who received these public health reports will notice in the report of March 28, 1919, an article that is abstracted from the Provost-Marshal General's report on the nation's physical fitness. From this report we take up, for instance, those groups that we have on this map here (indicating). Now, the whole number of men that were examined in the United States was very large. There were 9,000,000, I think, that registered, but of this number they were obliged to consider only 3,280,446 that came to an examination. The others had a deferred classification for some reason or other. In South Dakota, 25,806 were examined physically. Of this number, 19,718 were placed in Group A. We had, I think, about 33,000 men inducted into the service. We had 70.21 per cent placed in Group A that were fully qualified for military service. We had 1,183 men that were placed in Group B, which, you may remember, was the first remediable group. This was afterwards changed so that it only applied to drug addicts and some others specially mentioned, while hernia and that class of remediable diseases were placed Group C. There were in remediable Group B 4.58 per cent, in Group C in our limited service 17.75 per cent plus a percentage of 6.88. In Group D there were 3,131 placed, which was a percentage of 12.3.

An order came out in the latter part of last year for the Medical Aides to the Governors to look up the men in the state that had been disqualified for general military service and had been placed in Group D. These were classified by the Local Boards under Class 5, Subdivision G. Over 4,300 men were classed under V. G. by Local Boards, and rejected at first. This included a few men who had been placed and reclassified after rejection at camp. Of this total number of registrants, about 4,000, there were 105 men who were rejected by Local Boards on account of tachycardia and endocrinopathy, showing interference with the ductless glands.

When it comes to tuberculosis there were 207 men that were rejected on account of tubercular affections. When it came to organic diseases of the heart, outside of tachycardia, I presume some of those are mixed up in this, but of organic disease of the heart there were 331 men rejected. On account of hernia there were 145 men that had been rejected or placed in Group C. A great many of the examiners for Local Boards never got it into their heads that a hernia which they had rejected should not have been rejected, but should have been placed in Class C. That was the final orders of Class C cases which were the remediable group for that class of diseases. They still continued to reject these men when they should have been reclassified; but with the signing of the armistice interest in this class of work ceased, and it was almost impossible to get the work out of the boards so far as physical examinations were concerned. They would not do it. I do not believe we got in our last report to the Surgeon-General's Office until the middle of February.

On mental diseases, there were 312 rejected.

In regard to venereal diseases in this whole state, you have seen statements made in the different newspapers that there were as many as 2,000 men in this state that were rejected for venereal diseases. There were many people philanthropically disposed in this state who made the above statement. My records, which are complete along that line, show there were only 16 men in the state of South Dakota that were rejected on account of venereal diseases, and I think I have the most complete records of anyone in this state in regard to these matters. You can easily reduce that to percentages if you so desire.

Let us take this report of the Provost-Marshal General, which I have in my hand. Of alcohol and drug addicts, there were rejected 0.2 per cent. Of bones and joints, 18.3 per cent. That is 25 per cent more than the ordinary average in the United States, and yet, at the same time, how many of you see any great number of bone and joint diseases in this state? There seems to be a mistake there. I hope to find that mistake some day.

Of developmental defects there were 1.5 per cent. As far as digestive troubles are concerned, there were 0.7 per cent. There ought to be more than that. Dr. Parsons was talking to me this morning in regard to the ear diseases, and there were 0.2 per cent rejections. Of the eyes, there were 10.2 per cent. Of club feet we had 7.7 per cent, which was about 25 per cent for the average for the United States. In heart diseases we had 12.8 per cent, in hernia we had 8.1 per cent, of mental deficiency we had 3.8 per cent. Of nervous diseases, and that would include also some forms of mental diseases, we had 4.5 per cent. Of respiratory diseases that were tuberculous we had 7.4 per cent. This was the first draft of 1918. Of the respiratory non-tubercular diseases we had 2 per cent; of skin diseases, where we were at the bottom, we had 0.3 per cent. For bad teeth we had 6.5 per cent. Now, that is a very high rejection on account of teeth in a state like South Dakota because our people have plenty of wholesome food to eat; they have the best air and the best sunlight, and it is really a stain on a state like South Dakota to have such a large per cent of rejections on account of defective teeth. Of course, many of these people I suppose were of the older class, and came, perhaps, from places where they did not have much dentistry. Of disease of the thyroid gland there were 0.35 per cent. Of tubercular diseases (non-respiratory) we had only 0.3 per cent, and of other affections there were about 3 per cent of cases, so that you can see what this draft furnishes us so far as the results were concerned.

As to the lessons to be derived from a study of these drafts, I will leave that phase of the subject for some other time, because it has an important bearing upon health legislation in this state, and in looking after the propositions which are connected more or less with development of the child.

While I am here and have the opportunity, I want to call the attention of you gentlemen present to the fact that we are very anxious to get a complete list of all men that were commissioned and went into the service. I have a list from the Surgeon-General's Office which shows that 160 men were commissioned, received their commissions, and accepted them, but I know, at least, of 30 or 40 more that were commissioned who did not appear in the list of the Surgeon-General's Office. Take Dr. Swezey, of Wakonda. His name does not appear, and there are several other men. I would like the Board to take up that list and go over it and check up where you know of men who have received commissions and whose names do not appear upon the list which I have.

Again, you may remember that an attempt is being made by the American Medical Association to organize an association to be known as the Medical Veterans of the World War. This includes every one who is eligible to membership who served in any capacity whatsoever with relation to any war activities. This includes members of District Boards, members of Medical Advisory Boards, men who served as examiners on Local Boards, and men who accepted their commissions in the Medical Corps of the Army. Of course, that was known then as the Medical Reserve Corps, but afterwards the word "Reserve" was stricken out and it is now known as the Medical Corps. I have no doubt some of you are accepting positions on the new Medical Reserve Corps. All of you gentlemen are eligible for membership in this association. It requires only the nominal sum of one dollar, which you send to Colonel Russell in the Surgeon-General's Office. Commissioned and non-commissioned, or young medical men, have an organization which is being completed as fast as possible. I think that young Teddy Roosevelt or Colonel Roosevelt is the temporary head of that organization. An effort is being made through the Surgeon-General's Office and through the efforts of the American Medical Association to organize this association. Dr. Hubert Work, as some of you know, has had charge of the medical work in one of the divisions in the Provost-Marshal General's office. He is the speaker of the House of Delegates of the American Medical Association. He has asked me to distribute a lot of application blanks for membership here, and I think Mrs. Spafford has sent these blanks out to practically every one in the state. She sent out a personal letter to each one of the Local Draft Boards and sent a supply of blanks to each president of a Local Advisory Board. I think it would be well worth while to accept membership in this association, and as soon as a national organization is made permanent, which will undoubtedly be the case at Atlantic City in a couple of weeks, we will be able to organize this state into some kind of state organization. You see what this means. We are always kicking because we do not get this and that from the legislature. The legislature seems to sit down upon us. You mark my words. Every political fight from the time of Lincoln to the time of Roosevelt, at

least, was won by the organized effort of the veterans of the Grand Army of the Civil War, and the membership of the Grand Army of the Civil War would be very small as compared with the membership of this veteran association of this World War, and, if we are going to avail ourselves of any influence along the line of legislation and so on, it seems to me that now is the grand opportunity, for organization, because of 640 odd men in this state, at least 450 of them have served in some capacity or other in this war. (Applause).

DISCUSSION

Dr. F. M. Crain (Redfield): I think we all appreciate Dr. Spafford's paper and the tabulation he has made of the work of the Local and District Boards of the state. I feel a vote of thanks is due Dr. Spafford for his aid to the governor and his assistance to the Local Boards.

There were three classes of men we were called upon to examine and classify. In the first class were those who volunteered at the beginning of the war. So anxious were some of them to enter the service, and so fearful that their defects might cause their rejection, that deception was practiced and their defects were minimized, in order that they might pass the Board and get into the service.

The second class was composed of young men who were indifferent, and waited to be drafted, and, when drafted, seemed quite satisfied to enter the service. Among this class deception was rare.

The third class was composed very largely of those who were opposed to entering the service, some on account of religious convictions, and many for various and sundry reasons. In this class deception was carried to the limit. It did not take long to detect those who were endeavoring to evade service. Men with a moderate degree of flat feet, a degree so slight that no functional disability existed, were, from their statement, unable to perform any manual labor. From personal knowledge of some who were rejected on account of flat feet, in my judgment they should not have been rejected.

I recall a very amusing attempt at deception. A young man asked exemption on account of a goiter which he claimed disabled him from following his vocation, that of section laborer, at least half the time. He gave a list of symptoms quite characteristic of this disease. From inquiry I learned that no physician had ever told him that he had goiter, neither had he taken treatment for this disease. I learned from him that he got hold of an advertising book on the treatment of goiter put out by one of the goiter-cure fake institutions. Not content to rely on the goiter claim for exemption, he claimed exemption on account of having a father and mother to support. He finally admitted his father was a section foreman, and that he was working under him. This case illustrates to what extremes some of the drafted men went in order to evade military duty.

Men unblushingly claimed to have venereal diseases when no symptoms of an infection then existed.

For limited military service where requirements were not so rigid, we had men returned who were, from an intimate knowledge of the Board, 100 per cent efficient in the line of work they registered for. As an illustration, a good mechanic, a carpenter and a cabinet-maker, with no other disability than a loss of one eye, was rejected.

The Advisory Board was a great assistance to the Local Board in the discharge of our duties. Appeals from the decisions of the Local Board were in the main sustained. One notable exception was that of a young man whose weight was far below the standard. He was so anxious to enter the service that he took an appeal to the Advisory Board, who held that his under-weight was a remediable defect and accepted him. He was sent to camp and accepted and sent to France, and there went in action in the great offensive drive July 18, and was killed.

We had two men returned on account of incipient tuberculosis. It is not an easy thing positively to diagnose tuberculosis in the beginning of the infection, and we were unable always to detect infection in these cases.

The work the Local Boards performed during this service was laborious and required great sacrifices on the part of its members. Many performed this service gratitiously because they could not fill any other position in connection with army service.

Dr. B. T. Green (Brookings): It would seem from the discussion that the camp examiners need a little in the way of defense. I know there are several present who in common with myself, had abundant opportunity for observation. Perhaps some have acted in the capacity of camp examiners, and have winced under the criticism. They will agree with me that if you could see some of the men who had been passed by the Local Boards and sent into camp to become soldiers, you would wonder if there were any Local Boards at all.

There were many cases of chronic heart disease that could not measure up to any of the ordinary tests; and many cases of advanced nephritis were found. It was not uncommon to find cases of absolute deafness in one ear, or absolute blindness in one eye, that had slipped past the Local Boards. A review of the causes of many rejections would surprise any one not acquainted with the circumstances. At times one would wonder if these men had not come in without even seeing the examiners of their Local Boards.

The last speaker would lead you to believe that the camp examiners were unreasonable in their rejections. It may have been true in some instances, but I wish to say that as a rule rejections were made only after careful examinations by competent examiners. No doubt the Government would have been served better if more rejections had been made. Base hospitals would not have been filled with men who ought never to have seen service. We had wards filled with men suffering from chronic tuberculosis. Many of them died while I was at the base hospital. Many whose condition would warrant were sent to sanitaria for treatment. The base hospitals are still filled with cases of chronic arthritis, gastric ulcer, etc. Rather than criticise the camp-examining boards for unwarranted rejections of men passed by the Local Boards, it would be calmer judgment to question the rules set for the guidance of the camp examiners that permitted the hospitals to be filled with men who have broken

down under service because of physical defects that otherwise might have been ruled as sufficient cause for rejection.

Dr. E. O. Giere (Watertown): My experience agrees with that of the last speaker. For instance, a man was accepted for general military service by a certain Local Board. The man was sick, and he presented himself at our office for examination. We found him to be suffering from pulmonary tuberculosis, well advanced. He had fever, was emaciated, coughed and expectorated a great deal, the tubercle bacilli were abundant in the sputum, and the *x*-ray showed one lung practically destroyed. He returned to his home, and within a short time died of tuberculosis. It has happened that when a man has been examined by the Local Board he has been in apparently good health, no evidence of disease has been found, and he has been accepted for general military service. However, between the time of this examination and the day he arrives at camp something has happened to him, the camp physician detects the trouble, and the man is rejected and sent home.

Instances of this kind, I think, have occurred in the experience perhaps, of every Local Board and every Medical Advisory Board. No doubt, mistakes are made by Local and Medical Advisory Boards in not detecting disease where disease is present, especially in its incipiency. Neither can there be any doubt but what disease may develop in the person between the time that he is examined by the Local Board and the time that he presents himself at camp, this interval being sometimes of considerable length, and, when such is the case, the Local Board and the Medical Advisory Board are unjustly blamed. But if mistakes happen at one end of the line they will also happen at the other end. Camp physicians are no more infallible than others. As an instance, let me cite the following:

A certain young man was examined by the Local Board, was accepted, and sent to Camp Grant. There he was rejected and sent home. I do not remember on what plea. Later, our Board received an order to send our men to Camp Funston. This same young man, who had been rejected at Camp Grant, was again examined by our Board, found all right, as before, and sent to Camp Funston, where he was accepted, and he served his term. The mistakes are not all made at home. We had similar interesting experiences to those related by others. The duties involved meant a considerable sacrifice of time and much work, but I, for one, am glad I did not miss the experience I gained as a member of our Medical Advisory Board.

One thing that impressed me especially was the large number of cases of tachycardia encountered. In many instances the person felt perfectly well, and did not know that he had any trouble with his heart or otherwise. I will cite one interesting case: The man was an illiterate and ignorant foreigner, who could neither read nor write. He had failed to register, and he was arrested and sent to jail. The belief was that he had tried to evade the service. When brought before the Local Board, his pulse was found, upon repeated examinations, to run between 120 and 130 beats per minute. Later, the sheriff brought him before our Medical Advisory Board for examination. The man presented an appearance of innocence and indifference. He did not seem to care what the examination might disclose. He seemed the least interested of any person in the room. The examination revealed no evidence of disease, but the pulse registered 120. But why had he not registered? Was he trying to evade military service? Was he smoking cigarettes excessively? Or practicing other tricks to keep his heart working at that rate? No cause was found for the tachycardia, and he was returned to jail with instructions to the sheriff that his pulse be examined daily by the physician of the Local Board. This instruction was carried out for several days, but the pulse was at no time found to register below 120. Then he was rejected on the grounds of tachycardia, and he was granted his liberty on the assumption that his failure to register was not the result of any intention on his part to evade the service, but that, due to his ignorance and illiteracy, he had unintentionally failed to comply with the law.

Dr. N. K. Hopkins (Arlington): Dr. Spafford spoke of men being rejected on account of the condition of their teeth. I was on the Advisory Board in our district, and Dr. Rogers was the dentist on the Board. After being on the Board, Dr. Rogers went to Camp Pike in the service, and wrote to me from there saying, "Don't turn anybody down on account of his teeth; you ought to see the toothless wonders I am working on here, making Class A soldiers out of them. Don't turn them down on account of their teeth."

After that we did not advise anybody to be turned down on account of the teeth, and there was only one man sent back who had been rejected at camp on account of his teeth. I think the teeth explain why so many were rejected at first.

Dr. H. J. G. Koobs (Scotland): I noticed that after the first few examinations were made by our Advisory Board, the number of referred cases kept dropping off all the time, and I did not think much about the reason for it, but since Dr. Crain mentioned the subject, complaining that camp physicians rejected men that they had passed, I have wondered if perhaps it was not because we found occasion to reject a number of men who had been passed by the Local Board that they stopped referring cases to us. We do not like to have our action criticized; we like to feel we are right, and when disagreed with we are apt to think that the other fellows do not know anything. I think we ought to be fair to all concerned. We must remember the circumstances under which most of these examinations were made. Oftentimes they were made hurriedly, and on the whole I believe every one did the best he knew how. That there were mistakes made, there is no question.

I remember one man who came to me after he had returned from France. He had been in active service for eight months and in two engagements, and he presented the following condition: Chronic trachoma in both eyes, vision 20-150 in both eyes, chronic otitis media, and both ears discharging. He went into the service in that condition because I knew him before he entered the service. I said to him, "How in the world did you get through?" He replied, "Nobody questioned me." I said, "Didn't you have a good examination?" He replied, "Yes," but I might just as well have been examined by telephone." (Laughter.) He said he was simply looked at and had some questions asked him. I asked him if he had received his

discharge, and he said he had, but his discharge papers were at home. I said to him, "Were you discharged as being in good health?" He replied, "Yes." "Did they examine you when you were discharged?" He said, "No." I asked him who signed his discharge papers, and he replied, "My captain signed it. We filled out the papers ourselves."

The question arose in my mind whether a fellow like that is able to come back on the Government for compensation for defects in the future. It seems to me he has a comeback which was preventable.

Dr. Spafford (closing): In regard to what has been said on this subject, I want to repeat once more that I think under the conditions and circumstances our Local Boards and our Medical Advisory Boards did wonderfully good work. Never in the history of the world has such an efficient army gone into the field as the army sent out from the United States; and it was gotten together in a comparatively short time. The examinations were made by men who never did make a military examination before, who knew nothing about it until they got these rules and regulations which I am afraid some of them never read. (Laughter.) Notwithstanding that, gentlemen, the results of these examinations were extremely good.

Some rather humorous things occurred in connection with the examination of registrants. For instance, I looked over Form No. 1010 for men rejected at camp, and wrote a personal letter, I think, to every local examiner in the state. I called particular attention to the matters in which we fell down in the second draft, in which we received a black eye. Why? I always attribute our failure to this: our success was so great in the first examination in the 1917 registrations that, finally, Local Boards got the idea if any man could get by them at all, he was all right to send in on the second draft. I think a great many men were sent with that idea perhaps in view. But here is one thing we must not forget, and it is this: In the promulgation of the second rules and regulations from the Provost-Marshal General's Office, in regard to the examinations of registrants, we were told to turn down no man on account of his teeth, etc. Our men were examining registrants under these instructions, and the camp examiners—and they were the older men at the time—were acting under the old rules and regulations, which were promulgated by the Surgeon-General's Office, and which had been used for many years when they required men to be 100 per cent perfect if they got into the Regular Army. Here was where we suffered. Immediately, when they changed their rules and regulations along in July of last year, the Local Examiners became more careful in regard to these matters. They examined the men more carefully, and reduced the number of rejections over 50 per cent, and we had only 6.78 per cent rejected at camp during the last part. If the war had continued, we should have been very seriously handicapped on account of the existence of the influenza. The supervisor of drafts for these Northwestern states and the Adjutant-General and myself wired a joint telegram to the Provost-Marshal General's Office asking for a suspension of the draft so far as this state was concerned on account of the influenza. The draft was held up, and before examinations were resumed the armistice had been signed and everything was off, so that explains a great many things.

We had far too many rejections from January 1 to June 1, 1918. Of the next 15,000 or 16,000 we examined we went below the average in regard to the small number of rejections from this state. I want to relate a few instances that were rather humorous. I could relate a good many more. In going over the rejections from a certain county (there is no representative from that county here, so I can speak of it), in the examinations of the registrants, when it came to the condition of their eyes you remember there was a space in regard to the general condition of the eyes before you made the visual test. In the examination of this one man he was put down in the first space as having a glass eye on the left side. Then the examiner makes the visual test, and put down 20/20 for the right eye, and 20/30 for the left eye. (Laughter.) I wrote to the doctor who made the examination and told him that many years ago I removed an eye from an old Danish woman for some acute septic disease. I got a very good stump, and fitted her with a glass eye. It looked nicely, and had good motion. She came to me and thanked me afterwards, and told me about the amount of vision she had in that glass eye. She became very indignant when I told her that there was no such thing possible as a person seeing with a glass eye, but she insists to this day that she can see with that eye. (Laughter.) I related this instance to this physician, and I said, "Now, doctor, I find that John Smith, serial number and order number so and so, was examined by you. Your examination shows that his vision in the right eye is 20/20, and in the left eye, which is a glass eye, it is 20/30." I said, "Doctor, please tell me where I can get those glass eyes." (Laughter.)

This simply shows that the examination was made hurriedly, that no one suffered, but at the same time it was rather ludicrous to think that he should put it down on paper.

In regard to the rejections at camps and those by Local Boards: I think it is fair to say that all the wisdom of the country was not embodied in the Medical Examining Boards at the camps. Perhaps I ought not to say it, although I am out of service now, but I think there were, perhaps, a great many men rejected on account of examinations that were hurriedly made at camp, because, I believe, no man can rush men through like that and always be right, as Dr. Crain has said. I know that a great many of our local examiners never could understand why certain men were rejected at camp. I also believe that there were some men that had been rejected at one camp whom the members of the Local Board felt were all right. These men were afterwards sent to another camp, were examined, accepted, and went overseas. To such an extent was this experiment carried out by the different boards, or by some boards, not particularly in this state, but in different parts of the country, that the Provost-Marshal General's Office promulgated an order to the effect that if any man was rejected at one camp he should not be sent to another camp. I suppose that this was done for the purpose of keeping up the dignity of the examiners.

I think that many men who went to camp may have caught a little cold on the way, developed a bronchial irritation, and moist râles were found in the upper part of the lungs, and the examiners made a diagnosis of acute pulmonary tuberculosis, and the men were rejected right away and sent home. I think that ob-

tained in a good many cases, because in many instances I asked the local examiners again to go over the men that were rejected, and if they had any idea they were mistaken to go over them and satisfy themselves whether they or the other examiners were correct. I said that by so doing they could learn a great deal by somebody's mistakes.

You will find during the last part of the examination that an order was promulgated from the Provost-Marshal General's Office to the effect that the men that came back to camp and were rejected should be re-examined and re-classified by the local examiners. One of the men down in the southern part of the state, one of the most conscientious men I know of, wrote me a four-page letter on this subject of rejections, and aired his grievances. He said, "My God, doctor, what shall I do?" He had an unusual number of rejections. He said, "I came to this country; it has done a great deal for me, and I want to do all I can for it. If there is any place in the world where you can use me, or if you can send me into camp or anywhere else, I will gladly go, but for God's sake, let me off this Local Examining Board." (Laughter.)

Another physician, who happened to be in the extreme part of the state, wrote a letter along this same line. He did not know what he should do. I wrote back to do the best he could; that the medical examiner at camp had the advantage of having the last word like a supreme court, and that he must not take it so much to heart even if he had a certain number of rejections.

In closing, I wish to thank you all for the uniform courtesy I always received from the various boards.

HEADACHES FROM SINUS TROUBLES*

By C. C. Albright, M. D.
GREAT FALLS, MONTANA

Having noticed the trend of the recent literature on ophthalmology and rhinology, pointing to the nasal accessory sinuses as the cause of many eye-disorders and headaches, I wish to report a few cases that are of interest to me.

The February *Journal of Ophthalmology* contains the following articles:

"Bitemporal Hemianopsia Due to Acute Suppuration of the Posterior Nasal Sinuses," by Frank Conlon, of Lawrence, Mass.

"Monocular Retrobulbar Optic Neuritis from Hyperplasia of the Ethmoid Bone," by Derrick T. Vail, of Cincinnati, Ohio.

Captain H. H. Turner, of Pittsburgh, Pa., gives a paper on the "Etiology of Phlyctenular Ophthalmia," and gives nasal sinus trouble as the cause of practically all phlyctenular trouble in children.

Dr. Sluder, of St. Louis, has an admirable work on "Headaches and Eye-Disorders from Sinus Trouble," in which he tells of many cases of so-called migraine due to hyperplasia of the bone of the sinus walls.

Dr. Skillern, of Philadelphia, also tells us of sinus trouble in children at the age phlyctenular troubles are prevalent, so at the present time, I believe, the nasal sinuses are getting as much blame as was attributed to the tonsils a few years ago. In fact, so much is blamed on the nose that whenever I examine a person for glasses now I always examine the nose.

The cases I have selected for this paper I consider typical of the various sinus troubles:

*Read before the Montana State Medical Association at Missoula, Montana, July 10, 1919.

Case 1.—Mrs. M., aged 50, widow, does housework. She came to me in 1913 complaining of headaches and pain in the back of her eyeballs, especially at night on going to bed. She had about six pairs of glasses with her, but none relieved her headaches. After treating her with prisms for a week, I give her prisms to wear which she wore with some degree of comfort for three years, but still complaining of some pain in her eyeballs. In the fall of 1916, on returning from Hamilton, she came in again wanting her eyes tested. I then examined her nose, and found the middle turbinates in both sides greatly swollen, blocking the frontal sinus opening. The anterior ends of both middle turbinates were removed, which stopped all her headaches and the pains in her eyeballs.

In nearly all of these cases of headaches, due to use of the eyes, you will find the frontal sinus opening partially closed, and a tender point under the floor of the frontal sinus. Dr. Ewing, of St. Louis, was the first person to describe this, hence this is called *Ewing's point.*

Case 2.—Mrs. O., aged 32, housewife. She had been troubled with headaches developing on every attempt to use the eyes for close work for several years. This pain would start in the right eye, then run around to the occipital region, then down to the right shoulder, and between her shoulder-blades; and often she had a pain which she described as a "ball of fire" in the small of her back.

One year ago last winter she had an acute frontal sinus trouble on the right side which cleared up in a few weeks. On examination, I found the middle turbinate on the right side closing the frontal sinus outlet, and there was tenderness over Ewing's point.

I removed the front end of the middle turbinate and cleaned out the anterior ethmoid cells on the right side, and the next week after the operation she made a coat for her little girl and read a three hundred page book through, which amount of work it would have been impossible for her to have done in six weeks' time before the operation. Her headaches and eye-strain

were all relieved, and also pain in her shoulder and burning sensation in her back.

Case 3.—Dr. N. came into my office in November, 1918, suffering from a very severe pain in the right maxilla, and wanted me to tap the antrum and let the fluid out. Transillumination showed a clear antrum, but there was an acute coryza here with a great deal of thin watery discharge. I cocainized the nasal ganglion on both sides, with a great deal of relief, and he went home and slept all night. The next day some pain returned, but one more application of cocaine to the nasal ganglion stopped all the trouble.

Case 4.—Mrs. L. F., housewife, aged 32, was sent by Dr. N. She was suffering from headaches of a peculiar character. The pain usually started in the roof of the mouth, and then radiated around back of both ears, then under the eyes and in the eyeballs, which, she said, felt as though they would drop out. Then the pain would follow over the first branch of the trifacial nerve in the temporal region; and the maxillary division would often be involved. Then she would go to bed, and vomiting was often provoked.

These spells were getting more frequent, and in September and October, 1918, she was having them about once a week, and once she was in bed a week with the headache. Using her eyes for reading or sewing would often provoke an attack. She had some abdominal operation, and two sound molar teeth were pulled for relief of pain in the mandible, but no relief came.

Examination showed hypertrophied middle turbinates on both sides. I saw her in one of these headaches, when cocainizing the nasal ganglia gave no relief. I then operated on the right side, removing the middle turbinate and opening all the ethmoid cells and the sphenoid sinus of the right side. The next week she had no headache, but in two weeks she developed a slight headache on the left side, principally around the ear.

On November 6, 1918, I did the same operation on the left side; and since then she has had no headaches except once during an attack of coryza, when she had some pain, but cocainizing the floor of the sphenoid controlled this.

Case 5.—Mr. H., aged 34, a traveling man, came to me in July, 1918, stating that he had never been free from headaches since he was twelve years of age. At the age of four he was run over by a top-buggy, a wheel passing over his face, and at twelve he was blind for ten days, during an attack of la grippe; and he was in bed two months with rheumatism, during which time he grew six inches in height. His father, being a doctor, told him, at this time, that he had no knee-jerk, and had apparently some cerebral trouble. Later he went to Princeton University, where he saw several specialists, and in 1916, he went to Rochester, Minn., where he had some polyps and the left middle turbinate removed.

Examination showed a marked deviation of the septum to the left. This I straightened, and on transillumination the left antrum appeared dark. Needle puncture showed this filled with pus. I drained this into the nose, and his general condition began to improve, but his headache remained in the occipital region. This headache was not relieved until both sphenoid cavities were opened. These would not stay open, and both have now been opened three times. When they closed and filled with this fluid the occipital headaches would return. His antrum is still discharging some pus, but there is a good opening from the mouth into the nose, and he keeps it irrigated twice daily. This man stayed with me seven months, but is now on the road again, feeling greatly improved.

Case 6.—J. J. H., a lawyer for thirteen years in Oklahoma, came to Billings, Mont., in August, 1918, where his wife wrote me about him as follows: "Fourteen years ago, while in college, he broke his nose playing football, and shortly afterwards he noticed that the central vision of the left eye was blurred. Upon consulting a specialist he was told he had been hit very likely by some small substance on the pupil, which formed a scar, as it seemed he could not see straight ahead, but could see better at the side. He said that an operation might help, but there was no certainty that it would, but his other eye would become stronger, and he would hardly notice the deficiency. After fitting him with glasses, nothing more was done until November, 1914, when his other eye began to bother him in the same way, and then he went to Muskogee, Oklahoma, and saw two specialists. After examination and blood tests, they said they could not say what the trouble was. Later he went to Springfield, Mo., and after staying there three weeks, going through the routine of blood tests and various examinations, they told him that the trouble was with the macula of the eye, that the condition was considered incurable, and that he would probably get worse. In 1915 he went to San Diego, California, and saw another man, who made various tests, but could find no cause for the trouble.

"This is the last we have done. He seems somewhat worse than in 1915. Some days he can hardly read the head-lines in papers, other days by getting in a good light, he can read print fairly well. He sees enough to drive a car fairly well, but cannot tell whether a rig is coming or going. He can hardly recognize people he meets on the street, nor can he tell people across the aisle in church. He is a man of strong build, dark complexioned, and will be thirty-eight next month. He has always had good health, except at times he had severe headaches, and at these times his eyes would ache severely. For the last four years, since his eyes were in the condition they are now in, I have stayed in his office constantly and have done most of his reading."

From her letter, stating that at times his eyes were better than at other times, and from the headaches with severe pain in the eyes, I suspected sinus trouble, and wrote his wife, asking her if he had catarrhal trouble, and if his vision was worse when he had a cold in the head, and she replied that it was.

Believing that it would be a good gamble to open the sinuses, I wrote for him to come, and, upon examination, I found a deviated septum to the right. Otherwise the nose looked fairly normal, but he complained of mucus gathering in the throat during the night, and upon waking he had to spend some time cleaning out the nasopharynx.

The vision of the right eye was 20/70, and of the left eye, 20/200. The fundus appeared normal, except, possibly, a little pale appearance of the macula region, which might have been imaginary on my part. I advised cleaning out the ethmoid and sphenoid regions, and a septal resection, and he consented.

December 18, 1918: The septum being to the right, I operated on the left side, where the vision was 20/200 and he had been troubled for fourteen years. I

expected to find the trouble in the sphenoid, but, on opening the posterior ethmoid region, I found it filled with this greatly thickened membrane, which was filled with pus, and just beneath this lay the optic nerve without any bony covering. I then opened the sphenoid cavity, but found it perfectly healthy. I chanced to be in Billings on March 2d, and saw this patient. His vision in the left eye had changed from 20/200 to 20/30, and the vision in the right eye remained 20/70, the same as in December.

On April 1st I did a septal resection, and on April 6th opened the ethmoid and sphenoid sinuses of the right side. In the posterior ethmoid cells, the optic nerve had no bony covering, and a much thickened membrane was removed from this cavity, similar to that on the left side.

I have not heard from him since.

Case 7.—Mr. A. J. L., aged 27, was sent by Dr. Willett on May 5, 1919, because of headaches through the temples and eyes. In 1916 these headaches began, and would last about one day, when he would take some headache powders and retire, and on waking the headache would be gone. These gradually became more frequent till during the last three months he has had a continuous headache, except while sleeping. He has lost fifteen pounds in the last three years. During the last three months, smoking would provoke nausea and vomiting.

On May 5th I examined the nose, and found both middle turbinates swollen. There was a mucopus which could be constantly wiped out of the back part of the nose, in front of the sphenoid on the left side. I removed the middle turbinate, and opened all the ethmoid and sphenoid cells on the left side, and found a greatly thickened greyish membrane lining in the sphenoid, which is normally porcelain-white and smooth. On cocainizing the floor of the sphenoid, the headaches all left, and never returned.

Case 8.—M. K., aged 21, foundryman, came to my office on April 22, 1919, complaining of some headache and total blindness of the right eye and greatly blurred vision in the left eye. He gave a history of having a cold in his head all winter, so that he could not breathe through his nose, and also having a mucopurulent discharge. On Thursday he noticed his eyes blurring and on Sunday he went to a drug store and bought some eye-water, and, as he told me, after putting this in his eyes his right eye went entirely blind. He did not even have light-perception in his right eye.

Examination of the fundus showed a choked disc in both eyes, and nasal examination showed greatly enlarged middle turbinates on both sides. I opened the ethmoids and sphenoid on the right side on April 23d. He recovered from this nicely, and on May 30th his vision of the right side was 20/30, the left eye remaining 20/100, the same as when I first saw him, and shows evidence of choked disc.

He is a very bashful young man and I never would have seen him again had I not gone to his house and taken him to the office for examination.

SUMMARY

There is no doubt that most cases of so-called migraine, the cause of which has been hard to determine, and also a great many obscure eye troubles, are caused by accessory sinus disorders, and can be relieved by proper intranasal treatment.

PYELITIS IN GENERAL PRACTICE*

By J. P. Isaac, M. D.,
FREEMAN, SOUTH DAKOTA

Pyelitis is generally considered in connection with the various pyogenic infections of the kidney and its pelvis, including pyelonephritis, abscess of the kidney, empyema of the renal pelvis, etc. Specialists and surgeons are obtaining excellent results in diagnosis and surgical treatment of the severer forms of these affections of the kidney and its pelvis, but our topic deals with the early, simple yet insidious forms that tend to run a rather atypical course, and often remain unrecognized for a time, and puzzle especially the physician in general practice, because he is usually the first one consulted, and that, at a time when the disease picture is still rather vague.

Most of this class of cases are purely pyelitis, but, since we meet them in the precystoscopic and pre-ureteral catheterization stage, we are liable to miss our diagnosis, especially if routine microscopic urinalysis is not a habit with us.

In presenting the main features of the early stage of pyelitis,—that, before the cystoscope and catheter come into service,—it is well to bear in mind that these instruments are the mainstays in the diagnosis of all advanced cases.

Briefly described, pyelitis is an infection of the pelvis of the kidney and frequently the calices. The routes of infection are commonly accepted to be hematogenous, urogenous, and by contiguity. Hematogenous infection occurs probably most often by the colon bacillus. Long-standing cases of constipation or lesions of the mucous membrane facilitate entrance of the bacteria. Urogenous infection (ascending) follows infection of the bladder. Cystitis, on the other hand, no doubt often is due to instrumentation. Just how the ascending infection takes place I shall

*Read at the Thirty-eighth Annual Meeting of the South Dakota State Medical Association, at Watertown, May 21 and 22, 1919.

not attempt to explain, because it is puzzling better men than myself; but in some of my cases, and in most cases in females, this is perhaps the most common mode of infection. The direct transmission of bacteria through the lymphatics from colon to kidney is not improbable. While bacteria are always the primary cause, other accessory factors are important. Thomas R. Brown has summarized a number of accessory factors as follows: general and local infections, constipation, calculus, cystitis, stricture, phimosis, trauma, near-by focus, as appendicitis, tumors, pregnant uterus, gonorrhea, cold, injuries to the rectum, etc.

The symptomatology is very often not characteristic. The symptoms may be wanting or vague, or may be regarded as due to some other cause. Slight pain in the back with mild febrile symptoms may represent as serious a case as another with chills, high fever, severe pains, and urinary complaints, leading to a suggestion of the kidney as the seat of infection. A mild case may act much like lumbago, and a severe case like appendicitis. However, the main symptoms are as follows: changes in the urine (pyuria), pain, and, in severe forms, swelling, with constitutional symptoms. Pyuria is the pathognomonic sign, but often, owing to the absence of all evident signs, leading to suggest the kidney involvement, this symptom, though present, may remain unobserved. Frequency of urination, tenesmus, and anuria may be present. Pain may be present or absent. If present, it may be characteristic, beginning in the back and radiating to the genitalia. In a few instances it was as severe as that of renal calculus, probably due to plugging up of the ureter. Swelling in the loin, due to damming up of fluids, is a valuable sign which is more often found in severe cases. The constitutional symptoms are those of any fever and toxemia, differing, however, much in the degree of severity. Chills, fever, sweats, exhaustion, loss of weight, digestive disturbances, diarrhea, nausea, and vomiting are frequently observed.

In children there are often restlessness, pallor, and loss of appetite, with or without slight fever. Kerley points out that there are often pain and stiffness in the neck. This I have observed once in a little girl.

In the diagnosis of pyelitis, a careful study of the urine is essential. Pus and bacteria, especially the colon bacilli, in the urine, together with pain in the flank resembling lumbago, chills and high fever with remissions to the normal without any definite cause, should justify the diagnosis of pyelitis. Further diagnostic aids, more often beyond the scope of the general practitioner, are ureteral catheterization in adults to determine whether it is the pelvis of the kidney or the bladder that is involved. In children ureteral catheterization is not desirable, but the cystoscope may be used to exclude the bladder as the cause of infection. Dr. Wyncoop states that marked leucocytosis is characteristic of pyelitis, but that it is only slight in cystitis.

The prognosis is better in pyelitis than in suppurations of the kidney. Acute pyelitis often is cured, but there is a great tendency to chronicity. Chronic pyelitis may run a course of years, with alternate spells of improvement and exacerbations. In pregnancy recovery is favored by rest in bed. In children cures are common.

In the treatment of pyelitis water must be given freely, and in some cases a milk diet for a few days is advisable. Rest in bed for a time is usually indicated. In medication urotropine is most frequently used. In advanced cases pelvic lavage is much practiced by urologists.

The following is a report of several cases as they occurred in my practice. Characteristic symptoms are quite often conspicuous by their absence.

Case 1.—Mrs. T. H., aged 23, six months pregnant, had chills, fever, and a septic pulse; pain in the right iliac region with tension and local tenderness; urine, negative at first.

I sent her to a surgeon for an appendectomy; but that night, owing perhaps to a thirty-five-mile drive, a great profusion of pus was poured out with the urine. The diagnosis was changed to pyonephrosis, and proper treatment instituted. Symptomatic recovery followed during the next six months without operative interference.

Case 2.—Mrs. H. J. G., aged 25, had two children, and was pregnant a third time; was subject to pains in the back, chills, and fever. As a later symptom frequent urination, accompanied by burning pains, led to a more careful investigation of the urinary apparatus. I found the urine loaded with pus. This patient did not do well, nor did her urine clear up until several months after the termination of her pregnancy.

Case 3.—Mrs. A. P. H., aged 33, mother of six children; experienced a severe pain in the right hypochondrium about two weeks after her confinement, with local tenderness in the region of the gall-bladder, high fever, and accelerated pulse. In view of the history of a similar attack two years before, also after a confinement, when a diagnosis of gall-stone colic seemed to have satisfied everybody, I also made a provisional diagnosis of gall-stones, but a sample of the urine which I took home with me and further observation led to a change in diagnosis to pyelitis. She has apparently recovered under medical treatment.

In the above three cases we may look upon pregnancy as an accessory factor; and the source

of infection is probably lymphogenous by colon bacilli.

Case 4.—Miss G. G., aged 13 years, consulted me off and on during the succeeding two years. She had frequent spells of fever, pallor, and loss of appetite, with no characteristic symptoms pointing to pyelitis. Later, abdominal pains developed, with tenderness at McBurney's point; temperature, 100-101°; pulse, 100. Finally appendicitis with some reservation was diagnosed. For some reason no operative interference took place; and during the next few weeks a new set of symptoms appeared: pus in the urine, tenesmus, frequent urination, headache, and a stiff neck. About this time the diagnosis was revised not necessarily to exclude appendicitis, but to include pyelitis.

This little girl is still under observation. Laxatives and urotropine are all that has been used, and she is much improved at present.

Case 5.—Mrs. H. G. M., aged 35, has had five children, was subject to spells of backache, fever, and extreme exhaustion. She fell into the hands of a man who did a complete hysterectomy for her various troubles. On her return home I saw her with septic fever, rapid pulse, great weakness, constipation, a vague picture of any definite disease. However, more accidentally than otherwise, a severe pyuria was discovered. She had a history of frequent catheterizations during her stay in the hospital, and may easily have had an old infection stirred up. She continues to run the usual course of chronic pyelitis, though at times she appears to be quite well.

Case 6.—Mrs. H. B., a missionary's wife, home from China on furlough, with a history of mild infections in her several confinements, under the unhygienic surroundings of her Chinese home life, came home to her parents in poor health. Here she experienced a sudden chill, fever, prostration, loss of appetite, and a pain in the back. There was nothing characteristic of kidney infection in her subjective symptoms, yet a casual urinalysis revealed a severe pyuria. Salts and urotropine proved to be useful in her case.

The last two cases I look upon as ascending infections, probably resulting from infected birth-canals.

Summing up, we find that pyelitis in the early stages tends to run a rather atypical course; and, in order to reduce errors in diagnosis to a minimum, all cases of vague symptomatology with constitutional symptoms of septic infection, backache, and prostration should be investigated in view of a possible pyelitis.

DISCUSSION.

Dr. Percy Peabody (Webster): I have been particularly interested in Dr. Isaac's paper because of the large number of cases of this trouble we have had this spring. We have been rather inclined to figure that the influenza epidemic has had considerable to do with the number of cases that came to our attention because we had a larger number in proportion to the number we have seen in a corresponding period before. A great many of the patients we have seen were children, and it seems as though the majority of these cases were right-sided infections, apparently resulting in symptoms on that side. A good many of these cases were diagnosed at home by the parents, because of the acute onset, and because of some of the associated symptoms, as appendiceal infection. Some of them had localized tenderness and the associated symptoms of vomiting, rise of temperature, etc.; therefore we tentatively made a diagnosis of that condition ourselves.

The essential thing in these conditions is to make a diagnosis between the possible condition of nephritis associated with it, or whether we are dealing with pyelitis. Examination for casts and a large amount of pus present will eliminate the possible condition of nephritis. The leukocyte count, we have found, runs from 12,000 to 15,000, which is not abnormally high.

There is one thing we have found in the treatment of these cases which seems to help all of them. We treated them with the ordinary antiseptic, urotropin, and so on, and diet, but, since we have been alkalinizing the urine, the pus would clear up very rapidly, and, allowing it to do so before established again, there would be few pus cells left in the urine. The pus would start and re-appear again, but by rendering the urine alkaline for several days we were able to see these cases clear up rapidly. We have a few of these cases on hand at the present time, and we are continuing to alkalinize the urine which, we believe, is the essential thing in treating these cases, together with rest in bed, dietetic treatment, and so on.

The President: This is an interesting subject to all of us because we as general practitioners meet these cases more or less every year.

Dr. E. O. Giere (Watertown): I have nothing particular to say on this subject, although I was very much interested in what was said in the paper. It has been said that when the urine is rendered alkaline the pus will clear up, and when allowed to become acid again the pus will re-appear. That has not been our experience. The way we usually treat a case of pyelitis is to put the patient at rest, and if we think it is caused by a kinking of the ureter we elevate the foot of the bed; then we use ureteral irrigation twice a week, and then depend upon urotropin. If the case is a very acute one we probably use rest and urotropin alone, but urotropin does not act in an alkaline medium, and, if the urine is alkaline, we add acid sodium phosphate to render it acid, and we try to keep the urine from remaining alkaline, keeping it in a state of acid reaction. A great many of these cases of early pyelitis will entirely clear up under this form of treatment without any apparent trouble. If the trouble recurs, sooner or later the condition may become a surgical one. Either it is from a hematogenous source or it is due to stone or something of that kind and it becomes surgical.

With reference to the diagnosis of the condition: Not infrequently it is mistaken for an acute appendicitis, for gall-bladder conditions, and cholecystitis. Depending very largely upon urinalysis enables us to clear up the diagnosis.

There is one thing we should not forget, namely, if the ureter is plugged, we may make an examination once, and find the urine is all right because it comes from the other kidney, and no urine finds its way into the bladder from this blocked ureter. Sometimes it requires repeated urinalyses, especially at a time when the patient seems to void more urine than usual. Then whether it is due to kinking, or to a plug of pus, or

casts—whatever it is—it has to come away, and the secretion from the overloaded pelvis of the kidney enters the bladder, and then there is an abundance of leukocytes.

Dr. C. E. McCauley (Aberdeen): I would like to have some one explain this urotropin business. Some one has said that urotropin will not act except in an acid medium. Theoretically, urotropin is broken up, and the end-product we get from this breaking up is formaldehyde. The urotropin has to go through, supposedly, an acid stomach, and enter alkaline blood and be excreted through the kidneys. Why does this change take place? I have had good results from the use of urotropin given continuously, even when the urine was alkaline. I do not know anything about it, except that, clinically, we get results from the use of urotropin, but we do not get the best results where the urine is alkaline. I cannot understand the chemistry of it.

Dr. B. T. Green (Brookings): I would suggest in answer to Dr. McCauley that sometimes people get well in spite of medicine. (Laughter.)

Dr. M. C. Johnston (Aberdeen): I have nothing to add on this subject so far as the chemistry of urotropin is concerned. With reference to the differential diagnosis between appendicitis and pyelitis: I will say that the pain in appendicitis is more circumscribed and in a different locality, except in cases of retrocecal appendicitis. In these the symptoms are quite similar, but the analysis of the urine, as has been well said, will settle the differential point between the two.

I think many of these patients will get well if placed in bed and put on a diet without any medication.

Dr. Isaac (closing): I am not able to answer Dr. McCauley's question in regard to the chemistry of urotropin. Other drugs may be as useful. I have used it empirically, and I have often been pleased to notice how well these patients do under its use.

The purpose of my paper was not to emphasize the treatment, but to point out the vague picture of this disease, and the difficulty attending the diagnosis in general practice.

In reference to the cases I have enumerated and others I have observed: There is one thing that has impressed me as being particularly striking about pyelitis, and that is, how severely ill these patients can be for a time, and still make apparent recoveries.

One woman was severely sick in spells. I had her under observation for six years or more. I felt reasonably certain that she had either a pus kidney or a stone with a bad infection. I advised surgical interference, but she preferred to take her chances without it. She seems to have recovered.

Another woman, sixty-five years of age, had anuria for several days. On catheterization I obtained a few drams of pus and mucus. I thought she would die. But her condition cleared up and she got well.

THE CLINICAL VALUE OF THE ESTIMATION OF BASAL METABOLISM—PRELIMINARY STUDIES

By Edwin L. Gardner, M. D., and Thomas Albert Peppard, M. D.
MINNEAPOLIS

No energy is lost in the process of combustion. In order to mobilize energy oxygen is absorbed and carbon dioxide is given off. In 1885 Rubner showed that the law of conservation of energy is true when applied to the living organism. Energy in animal life is derived from food, which is oxidized shortly after ingestion or is piled up in various store-houses of the body to be drawn upon according to the individual demands. The gas exchange takes place almost entirely in the lungs. The ratio of the volume of carbon dioxide expired to the oxygen retained in the body, known as the respiratory quotient, will depend upon the character of the combustion taking place in accordance with the following equations:

1. Carbohydrate (Dextrose)

$$C_6H_{12}O_6 + 6O_2 = 6CO_2 + 6H_2O$$

$$\text{R. Q.} = \frac{CO_2}{O_2} = \frac{6}{6} = 1$$

2. Fat (Olein)

$$C_3H_5(C_{18}H_{33}O_2)_3 + 80\,O_2 = 57\,CO_2 + 52\,H_2O$$

$$\text{R. Q.} = \frac{CO_2}{O_2} = \frac{57}{80} = 0.71$$

3. Protein (Albumin)

$$C_{72}H_{112}N_{18}O_{22}S + 77\,O_2 = 63\,CO_2 + 38\,H_2O + 9\,CO(NH_2)_2 + S.O_3$$

$$\text{R. Q.} = \frac{CO_2}{O_2} = \frac{63}{77} = 0.83$$

Metabolism may therefore be measured by expressing energy-production in the terms of heat units.

The determination of the heat given off by an organism by actual measurement is known as direct calorimetry; calculation of the heat-production from the gas exchange is known as indirect calorimetry. Since proteins are not completely oxidized in the body, but are partly eliminated in

the urine and feces, there should be, theoretically, a small correction for this in the latter method. In routine work this may be disregarded, inasmuch as the respiratory quotient of the non-protein catabolism differs very little from that of the total. The results of these two methods of calorimetry agree within narrow limits, the average variation being 4 per cent with a maximum of 10 per cent. The requirements of the direct method are too elaborate and cumbersome except in the experimental laboratory. The work of Benedict, Lusk, and DuBois has demonstrated the accuracy and clinical application of indirect calorimetry. A relatively simple technic for clinical studies has been furnished by Boothby and Means.

Basal metabolism is the minimum amount of energy compatible with health put out by the body while at absolute rest. Rubner first pointed out the direct relation of the basal metabolic rate to the surface area of an animal. A small person has a relatively larger body surface than a large one; therefore more heat is produced per unit of weight. Meeh's formula for estimating surface area has been found inaccurate, and has been superseded by one constructed by DuBois, which makes correction for height, as well as for weight. The normal average of calories per square meter per hour varies with the age and sex of the individual, diminishing with increasing age and being somewhat less in the female than in the male.

The technic of studying the respiratory exchange is not difficult, but minute attention to detail is all important, and in the interpretation of results many factors must be considered before any conclusions are warranted. We, in the main, have followed the technic of Boothby and Means. In order to standardize results, an exact routine has been followed. The patient reports at the laboratory at least fifteen hours after the taking of food, and with as little exertion as possible (a short street-car or automobile ride causes very little variation in results). The patient disrobes, and is put to bed in a warm room and cautioned to lie quietly for a period of thirty to forty-five minutes. Notation is made of the mental state, movements, pulse-rate, and respiration (rate and type). Encouragement is given to breathe quietly and in a natural manner. At the end of a thirty minute period a comfortable, well-fitting mask is applied, and supported by an attendant. The patient breathes through opened valves until the breathing is thought to be entirely natural, when the expired air is collected in a spirometer for a ten-minute period. The air is measured, and corrections are made for temperature, barometric pressure, and vapor-tension, thus securing the amount of air expired in a ten-minute period, dry, at 0° C., and at 760 mm. Hg. Samples are then withdrawn and analyzed in a Haldane gas-analysis apparatus for the percentage of oxygen and carbon dioxide present. The amount of heat produced in the period of time under observation may now be calculated if we have the respiratory quotient and the calorific value of either the carbon dioxide or oxygen for the respiratory quotient determined. Since the percentage of carbon dioxide is low and the calorific value high, the error is less if the oxygen-heat value is used in the calculation. Knowing the total ventilation per minute, the respiratory quotient, the total value of oxygen absorbed, and the heat value of oxygen, it becomes easy to calculate the total calories per hour, and further correction is made for the surface area of the individual. The final results are expressed in calories per square meter per hour.

Many sources of error arise which may make worthless the results, but they may be avoided by experience and minute attention to detail:

1. Errors arising from the patient:

a. Muscle rigidity may increase the basal rate as much as 25 per cent.

b. Walking across the room, 15 per cent.

c. Forced breathing, 10 per cent or more.

d. Suppressed breathing diminishes the metabolic rate.

e. Taking of food (coffee) on the morning of the test can increase the rate.

f. Heavy eaters have a higher rate than light eaters.

g. Fever increases the metabolic rate.

h. Malnutrition or starvation decreases the rate.

2. Errors arising in the apparatus:

a. Leaking masks or valves (the Seiben-Gorman valves and mask have not proved satisfactory in our hands, and we are now using a mask and valves of special design).

b. Re-breathing, due to improper closure of valves or due to an improperly weighted gasometer with which the patient has to breath against pressure, increases the metabolic rate. (An 0.2 per cent increase of carbon dioxide in inspired air has increased pulmonary ventilation up to 100 per cent.)

3. The metabolic rate may be increased by a lowered temperature in the room.

4. Errors arising in gas analysis:

a. Although the principles in gas analysis

are easy, it takes considerable practice to manipulate the many stop-cocks and mercury bulbs, and this can be done only by someone who is doing analyses daily.

b. Allowing too short a time for absorption of gases, or the failure of the solutions themselves to absorb gases properly, especially oxygen.

c. Great disadvantage of the occasional analysis is the fact that duplicate analyses on the same apparatus may check perfectly and still be in error, consequently duplicate or triplicate analyses should be done on separate apparatus.

d. Care in taking of all readings, if possible, having all readings checked by another person.

Clinical application:

I. Dysthyroidism:

a. All clinically hyperthyroid cases at the time of examination show the metabolic rates increased.

b. Clinically, myxedematous cases at the time of the examination show metabolic rates decreased.

c. Suspected and borderline cases. Repeated studies of the basal metabolic rate have been of unquestioned value in the differentiation of hyperthyroidism from early tuberculous toxemia and other low-grade infections. Neither early tuberculosis nor focal infection has shown any constant increase above a normal level. Many patients who formerly were classified as neurasthenics, especially the "fat neurasthenics," or others with mild grades of mental and nervous depression, have been shown to have rates lower than normal. It is important to recognize these cases long before the end-stage, myxedema, as thyroid therapy frequently gives very gratifying results.

II. Other endocrine glands; however, there are syndromes which frequently point to endocrine glands, other than the thyroid.

III. Some cases of hypertension have been shown to have rates either above or below normal. It has been of interest to note that in some cases where the rate was below normal, thyroid therapy brought about improvement in symptoms, and the blood-pressure was lowered. This has occurred in only a few cases of so-called "essential hypertension."

IV. It is of interest to note that various conditions which have been empirically treated successfully by thyroid extract, such as chronic arthritis and menorrhagia of adolescence, fall into the group with rates below normal.

V. Pernicious anemia and leukemia, as well as cardiac decompensation and acidosis, show rates variably increased above normal.

VI. Thyroid therapy in a measure can be standardized and controlled in a way not hitherto possible. Thyroid extract seems to have a cumulative effect not dissimilar to that of digitalis; the maximum dose to bring about full effect can be given in a short time or divided over a longer period. When the full effect has been noted as determined by clinical symptoms and normal metabolic rate, very minute doses will maintain the desired effect.

Our experience derived from the study of 400 cases seems to warrant the following conclusions: The estimation of the rate of basal metabolism is a laboratory procedure of great diagnostic and therapeutic value when carefully done and checked, and when it is considered together with the clinical syndrome.

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MILITARY MEDICINE, ANCIENT AND MODERN

Now that part of the war is over, it may not be amiss to comment upon the medical side of the war. First, to express our appreciation of those who entered the army and who thereby gave up the comforts of home, the companionship of friends, and medical practice, which really means a great deal to medical men who are reasonably well established. To those men, and to the men in the regular army who have seen long service in many countries, we can show our gratitude and appreciation by any method which will make their task easier,—that is, the man at home gives up what he can to benefit those who are away. The sacrifice may seem small, but in reality it has been large.

During the sudden mobilization of the medical men of the United States some errors crept in. Some men were not fitted for the service, but the majority of such were eliminated after being given a fair trial in the camps at home, and sometimes in the camps abroad; however, the men who left home and really did good work, and who have returned, deserve the highest consideration from their medical friends and associates, and surely deserve the return, so far as it is possible, of all the patients that were left behind and temporarily taken over by the men at home.

The old regular army medical man is a fixed institution. He has been in the service for years, and he has been tied down or bound down by government rulings and restrictions that have made him more or less a "machine" man, and perhaps stunted him and kept him from developing into an up-to-date and efficient medical man. Then, too, the general staff have a way, all their own, of doing things, a time-honored way, and yet, in many instances, a way which is behind the times. Men who had grown old in the regular army medical service were put in charge of medical and surgical work for which they were entirely unfitted because they knew nothing, or very little, of new, modern, advanced medicine. Naturally, they had attained rank, and their rank was one of domination over the younger man, whether he was in the regular ancient army service or belonged to the Medical Reserve Corps.

It is probably true that there were comparatively few men who were really incomptent; but among these few there was a great deal of retardation, not only in field but in hospital work and in the work that belongs to the modern man. For this reason there has been more or less criticism by the modern medical man of the old-time methods in use in the army. A large number of highly trained, skillful, and well-known medical men and surgeons, as well as laboratory and research men, were sent to camps here and across the waters, but they, too, fell under the spell of the governmental tape, which bound them, and which prevented them from exercising their normal functions in medicine. It has been remarked repeatedly that trained men in many departments who had initiative and resourcefulness far beyond the unenlightened, ancient military man, were subordinated to such a degree that they sought relief from the service, or were tempted, perhaps, by some of the semimodern men in regular service, to join the ancient order of medicine and to follow its mandates, even though they were restricted beyond all comprehension. The result was that some of the service was very irregular, not uniform in character at all, and, as a result, the troops suffered for the want of medical attention, whereas the modern man would have instituted plans, would have had the foresight to anticipate army movements, and would have been ready for the work.

It is quite true that the medical men in the Red Cross service were often able to do a great deal more than the men of the Reserve Corps, because the Red Cross men were given greater liberties and had means at their disposal for rush work. The Red Cross man was able at times, especially at critical moments, to rush hospitals, physicians, and nurses to the front when the reg-

ular army man was unable to move a leg. Thus, the Red Cross surgeon often saved the day, and administered to the needs of the wounded, who would otherwise have been neglected.

It seems very unfortunate that this state of affairs could exist with the present-day methods of work and accomplishment. We do not mean to infer, of course, that the whole army, both ancient and modern, was at such a disadvantage; many of the new men who had initiative and executive ability were recognized by the older men who were conspicuous for their ability to think ahead, and were given an opportunity to organize and carry out advanced methods by a summary cutting of the red tape previously imposed by the Government.

Evidently, this experience will give the Government an opportunity to equalize more thoroughly and more consistently the work of the ancient and modern medical men. The new man is the coming man; the old man is the going man; and unless this inevitable condition is recognized there may be constant friction.

Then, too, there was jealousy between the old and the new schools in medicine and surgery. The men who were in service in the Civil War, or who served through the Spanish-American War, were still behind the times in most instances; and they had not even learned from the unfortunate experiences of the Spanish-American War that there were many things in sanitation and hygiene, in medicine and surgery, of which they knew nothing; or perhaps they were handicapped by governmental fixed rules.

Of course, one recognizes the suddenness of the demand upon the Government for this great medical service, and one must be willing to make allowances for many of the mistakes and mishaps. Taken all in all, the men of the Reserve Corps did a tremendous amount of good work, and they undoubtedly smoothed over many of the frictional areas that had been artificially created. They also left their imprint on the older medical men, in spite of their earlier training. They showed them what could be done with knowledge of things modern and up-to-date.

Should the occasion ever arise again, the whole medical system will doubtless be, as it should be, transformed into the most modern lines.

The reserve man was, to a great extent, unrecognized as to rank,—that is, the rank he should have received. A great many of our biggest and best men were known to have been enlisted as lieutenants when they should have been ranked as lieutenant-colonels, or even lieutenant-generals, not only for their standing in the medical and surgical world, but for their keenness for the work under the greatest handicaps and most unfavorable conditions. Some of the men in the Surgeon General's Office at Washington saw the futility of making great changes. They also saw the friction which was bound to occur, and they deplored the unwillingness on the part of the regular army to accept the modern ideas.

There was also a political side to it which cannot be overlooked. There were some men in the service who were simply politically appointed, and who proved to be burdens, rather than helpers.

This editorial assumes from its tone, perhaps, that there is apt to be another war. Even if it does, the way to prepare for it is to begin now to remove, if possible, some of the restrictions and bindings which the ancient medical men of the Government hold so dear. The next war will be a young man's war, and he will be ready with up-to-date medical, surgical, and laboratory knowledge; if he is, the old man had better be retired by the Government, in spite of his years of service, and in spite of his dignity and rank.

THE KINK IN THE MIND

The disturbances of all classes due to war unrest, to epidemic diseases, and to sudden and violent changes in the life of the individual, have produced some very interesting studies in disturbed mentality, both in the civilian and in the soldier.

The man who went into war, through whatever motive,—duty, patriotism, or a desire to get into the game and follow the leader,—got into the service with apparently no mental or physical handicaps; and yet the period of his service and the experiences which he underwent brought out the latent factors of which he knew nothing. This man may be brawny in muscle, large in frame, vigorous, active, and fearless, and to the usual onlooker he may seem a man fit for his job. But after going through the experiences of enlistment and of camp life, the excitement of being sent over-seas, the uncertainty of his destination, subjection to the severe discipline under which he voluntarily placed himself, he finds that he was unable to continue in the service, or perhaps the armistice kindly intervened in his behalf. Whether he got into action or not is immaterial. Possibly the Government was at fault in not caring for him properly. Perhaps he was further handicapped by an attack of

influenza, lying in the hospital for days, weeks, or months, suffering from the disease and all its complications.

He has come home, and is again subjected to all kinds of excitement, met with enthusiasm, acclaimed as a hero, and given a small sum by the Government to start him in his vocation. He was not wounded, but he was a part of the great army, and as a unit he was trained and disciplined and subjected to exposures of all kinds. Now, if he really has a substantial constitution, and is physiologically clear in his nervous system, he will, in time, adjust himself to his native surroundings and his former occupation. We say "in time," because it has been demonstrated over and over again that many of the men who have returned from service, and who have been living out-of-door and well-regulated lives, are extremely restless; but these men get over it, and again become firm units in the whole structure. On the other hand, the man who has a concealed taint or tendency, or a nerve weakness, had associated himself so long with his fellow men that the discussions which he encountered and participated in brought him to a false conclusion. He becomes restless even before he gets home. He speculates on what the Government has done for him, and what it may do for him in the future; he wonders whether his job is waiting for him; or whether he will be obliged to seek other fields of activity; and it is during this period at the end of the war that he shows the kinks in his mind, which, though of various orders, are quite apt to turn against the Government and its methods.

Perhaps, too, he has encountered many political opponents,—believers in side-lines; perhaps he has met men who were talkative on subjects of which they knew but little. This has helped to unbalance his judgment and his logical findings. As a consequence, he presents himself to the physician feeling that he has been in some way ruined by his experiences. He believes that his career has been shortened because he feels an intense fatigue and a restlessness which he never experienced before. He finally reaches the conclusion that this is all the result of his army experiences, and that the foundation of the Government should be overhauled and rebuilt out of his own and his companions' experience.

He does not attach much importance to his illness, his influenza. He thinks that was of minor consequence, because he does not know that the influenza seeks out the latent and weak spots in his nervous system, and sufficiently disorders his mentality so that he says things and feels things that are abnormal. Instead of ascribing his condition to his infectious and communicable disease, he tries to lay it to the Government. The result is, that he becomes one of the class of minor agitators. He is restless, not only in his mind, but in his body, and he naturally seeks his restless fellows. The outcroppings of the kinks in his mind bring him to a point in his home life or in the life of the municipality that no one would have dared to predict. His morale is lowered, his morals are scarred, and he looks upon others with suspicion and disfavor; but, if he can once be convinced that all of this is due to his illness, and not to his army training, he comes back again as a useful citizen. The main points that most of these men present are their distorted view of life and, much to their surprise, their extreme and engrossing fatigue. These two symptoms are quite sufficient in themselves to enable the physician to determine that the whole state of their mental and bodily fatigue is due to the influenza, and to nothing else. Of course one must grant that the extreme methods of discipline, the out-of-door life, and the regularity, to a man who previously had had very little of these, would produce a change in their attitude and feelings; but it may be a change for the better, while in a few the change is for the worse, because it brings out their weaknesses, although not to the same degree as they are brought out by the influenzal infection.

We must be on our guard, therefore, to recognize this type of man, and to ferret out his history by our "paper work," in order to arrive at a sane and just conclusion. The newspapers have been filled with accounts of soldiers and civilians who have unexpectedly exhibited a change in their traits of character; and we look at it logically from a neuropsychiatric point of view only when we admit that the nervous system, in undergoing severe strains and unusual methods of living or unexpected physical disorders, is apt to give way in some of its constituent parts.

It is more than likely that a number of men who are at present restless and unhappy, and who are making tremendous demands upon industrial leaders, are men of this type, fundamentally and primarily unstable in mind and body; and it requires only a kick or some sort to bring out the kinks in their minds. As Dr. Southard has said, these men should be under the observation of the psychiatrist and neurologist in order to study definitely the varying traits of character. The psychologist will tell you that this class belongs

to him because he attempts, by psychological methods, to analyze the changed mental attitudes; nevertheless, he needs as his aid a physician who is thorough, scientific, and broad enough to inquire into one's antecedents, early life, training, and education.

As we study this subject from month to month these facts must be more and more impressed upon us; and, if we have a new epidemic of influenza this fall or winter, we shall have more of these people to deal with.

ANTICIPATING AN INFLUENZA EPIDEMIC

After viewing the summer colds and mild attacks of influenza that have persisted and extended over wide areas, we are led to ask whether we are to expect a further and more severe epidemic this winter? This is the question that has agitated the minds of many medical men; and it behooves us as medical men, as well as other bodies active in health measures, to prepare for what we may be confronted with. We did this three years ago in anticipation of a new epidemic of infantile paralysis. Everything was ready, but for some unexplained reason the epidemic located itself elsewhere, and Minnesota had very few cases last year and the year before and has had almost none this year, although the disease did appear in other states in moderately epidemic form.

The preparation for a future influenza epidemic depends upon our willingness to observe some of the simple rules of health. First and foremost is the necessity of an abundance of air in one's sleeping-rooms. Those who went through the epidemic last year with open windows and with reasonable care of their bodies escaped its baneful influence; those who closed their windows and did not expose themselves to the health-giving fresh air were the ones who succumbed to the attack. Rest, and rest in bed, is the next most powerful therapeutic measure. Careful attention to the gastro-intestinal tract seems to be demanded now, on account of the numerous cases during the summer in which this tract suffered most. Many people had mild colds, with sore throats, for a day or two, and then thought themselves recovered, only to find a few days later that they had a disordered stomach; sometimes they were nauseated, the nausea at times being accompanied by vomiting, and not infrequently an extensive diarrheal condition existed.

With the advent of cold weather this gastro-intestinal form may stop and the influenza again attack, as it never has done so extensively before, the central nervous system.

The man who makes light of a cold following an influenzal siege is neglecting his duty to his patient and to himself. Every patient who has a cold should be carefully looked after. It has been proven by a large number of cases that a bronchial influenza is a very common thing, and during the winter the pneumonic involvement was appalling. This summer the number of cases of pneumonia has been infinitesimal, comparatively, but the winter may bring this phase of it again.

It has been demonstrated that people who had influenza in the fall were apt to have a bronchial influenza throughout the entire season, increasing and decreasing according to the care which they received. Further, it has been proven by observation that the disease has apparently invaded many areas of the body, appearing at one time in one form and later in some other form, making it often puzzling. Why there was a recurrence of the disease should not be difficult to understand when we know that re-infections have been very common. Then, too, among the neuropsychiatric cases—and they have been extremely numerous—the patient gives the history of an influenza attack in October, November, or December; during the interval between that time and March, April, or May the patient was not altogether well, yet was able to resume, in a measure, his former vocation. Then, apparently without any further cause, he became either nervous, nervously tired, or mentally tired, and had either a fixed neurological condition or a typical mental state, mainly of the depressive type. Some of these cases can readily be explained on the ground that the myocardial conditions had been overlooked or not given proper attention, thus causing a disturbed circulation in the nervous system, which was then vulnerable, and indirectly, therefore, bringing out a nervous or mental disease.

With these points in mind, one can readily see the necessity of fresh air, rest, and proper feeding, and with them, too, a modification of occupation; and at the first suggestion of heart tire or nerve tire, the patient should again be put in bed. At this point we face many therapeutic problems. What shall we do? What can be done for these myocardial and nervous cases? Again the answer is rest and special attention to the care of the body.

It is quite probable that the serologist, the vaccine-manufacturer, and the physician who believes in the vaccine theory for prevention, will again confront us with their experiences and belief that the serum therapy is the prime element in prevention. Whether this is a fact or a hollow snare, no one knows. Even now there are people who have undergone vaccination who believe that they are entirely immune; and perhaps they escape infection by their confidence and blind faith in what they believe to be a protective measure. However much value there is in the vaccine theory, other control measures should not be overlooked. At the present writing no one has definitely succeeded in isolating the influenza germ. Many have claimed they have done this, but they have failed to prove their claim.

Isolation is very necessary. A person sick with influenza, or a bad cold even, should not expose himself to others unless sufficient protection surrounds him. Even in the summer gastro-intestinal disorders it has been shown that the same type may go through an entire family; and yet very few people have been vaccinated this summer. Very little has been written so far on the necessity of early vaccine treatment. With isolation of the patient, fresh air, and rest, and control of the epidemic by authorities, the attacks will be lighter in all probability, although no one can say with any great definiteness.

The people who have gone through this past epidemic with harsh breathing, weak hearts, and a weak nervous system, have been slow in recovering. Many are still weak, tired, and unable to carry on their work.

The subject is open for discussion, and probably will receive its full share.

MISCELLANY

EFFECT OF THE WITHDRAWAL OF SPINAL FLUID

It has been found, clinically, that infections of the meninges occur not infrequently following the release of normal spinal fluid by lumbar puncture during a septicemia. Five such observations have been made personally and similar cases have been found in the literature. The close analogy existing between these cases and certain experimental observations reported elsewhere indicate that the withdrawal of spinal fluid should be seriously considered as a causative factor in the production of meningitis under certain conditions. To prevent the possible accidental production of a meningitis as a result of diagnostic lumbar puncture it is recommended (1) that careful consideration be given the bacteriological study of the blood before such punctures are attempted; (2) that in acute diseases, in the absence of definite signs of irritation of the central nervous system, lumbar puncture should be avoided unless it is first conclusively shown that the blood stream is free of infection; (3) that when the clinical symptoms are such as to render a lumbar puncture advisable, minimal quantities of fluid should be withdrawn, sufficient only to permit necessary laboratory tests to be made; (4) that small-bore needles should be utilized in performing the operation to prevent as much as possible subsequent leakage of spinal fluid into the surrounding tissues.—Summary of a paper in the August Am. Jour. of the Medical Sciences.

SYPHILIS AND IRREGULARITY OF THE PUPIL

Dujardin and Rasquin (Ann. d'ocul., February, 1919, p. 89) by the term irregularity of the pupil qualify any angulation of the circumference of the same. Normally the pupil is quite circular, or at most slightly oval, with the long axis sensibly vertical. The pupil should be examined for irregularity both by natural and artificial light. As a result of their studies they find that irregularity of the pupil is an extremely frequent symptom in the course of syphilis, especially from the secondary stage onward, and the more frequent with the lapse of time; in fact, such irregularity may be the sole pupillary symptom in advanced syphilis. Irregularity of the pupil is probably syphilitic in 70 per cent of all such instances, so that every case of "essential" irregularity should be examined serologically and even by lumbar puncture.

AN APPEAL TO THE FACULTY OF THE MEDICAL SCHOOL OF MINNESOTA

The following is a copy of letter received from the University of Lille, France, addressed by the Faculty of Medicine and Pharmacy, to the Dean and the Faculty of the Medical School of the University of Minnesota.

Gentlemen and Honored Colleagues:

On the day following the bombardment of our City,—a bombardment which had not spared either our hospitals or our University buildings.—the Germans appeared at the hospital of St. Sauveur. They gave the personnel the grace of a few hours to transport elsewhere their patients, and, without concerning themselves to know if other accommodations were open to receive them. they took immediate possession of the wards, the laboratories, the operating rooms and the museums.

Now this hospital is the principal center of clinical teaching in the University of Lille; it maintains seven teaching services, all of the laboratories serving for the instruction of students and annexed to, or independent, of these clinical services the outpatient dispensary for the poor.

Not only were our patients expelled from their beds, but also during the succeeding four years the German Professors and Doctors, who had taken our place, not merely used our instruments and all of our scientific material, but they literally appropriated them. They carried away all that was possible of conveyance and the remainder they systematically destroyed. All the museum collections, the books, the photographs, the

apparatus and the anatomical models were pillaged. The same was true of our laboratory records, of our personal documents, and of all our scientific works in course of preparation. Nothing was spared by them. at their departure our laboratories, our operating rooms, and our museums were completely gutted, containing no more than masses of destroyed material and the debris of our instruments. In all that hospital not one object remained intact.

In the month of May, 1918, the German military authorities decreed that the University buildings, including the laboratories of Zoology, Parasitology, Physiology, Histology, Pathologic Anatomy, Therapeutics and Prosthetic Dentistry, and a part of the laboratories of Anatomy and Analytic Chemistry, the Amphitheaters, the clinic and assembly rooms, and the chambers of the Secretariat, be taken and transformed into service bureaus for the administration of railways. Two days were given to effect the removal of all furniture and scientific material, of which a very considerable quantity had been stored in all haste in the several rooms which we had vacated.

Now, Article 56 of The Hague Convention formally declares that University establishments and all that they contain shall be respected by the occupier. At Lille the occupying Germans viciously trampled under foot this stipulation of the convention; these people refused even to do honor to their own signature.

We denounce these acts, with indignation, to the savants of the whole civilized world, and we stigmatize most particularly the conduct of the physicians and professors in the German Universities, who have profited by their sojourn in the quarters of the University of Lille to practically destroy all of our instruments of service. We declare that we will refuse to resume any fraternal relations with the German Medical Corps and we hope, Gentlemen and very honored Colleagues, that in this matter you will closely associate yourselves with us.

For the Professors and Technicians of the Faculty of Medicine of the University of Lille, in execution of a decision taken at an assembly of the Faculty.

H. Combemal, Dean.

Lille, the 10th of May, 1919.

BOOK NOTICES

Medical Clinics of North America, Volume II, Number 5. (The Boston number, March, 1919.) 1,549 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1919. Published bimonthly. Price per year: paper, $10.00; cloth, $14.00.

The Boston number is opened by a very comprehensive and practical discussion of differential diagnosis in a case of skin pigmentation, which was observed by Dr. Henry A. Christian for several months. The new complications as they arise, and at last the autopsy report are most fascinating in their development and presentation.

The importance of early diagnosis of uterine cancer is emphasized by Dr. W. P. Graves.

Dr. C. Frothingham reports a case of gangrene of the lung due to pressure of aortic aneurysm.

From the clinic of Dr. G. R. Minot comes reports of four patients with enlarged spleens, showing the value of careful blood-studies in making the diagnosis between Banti's disease and leukemia.

In a sensible and optimistic paper Dr. John B. Haws reports that tuberculous patients have resisted influenza unusually well and that he has not seen the increase of active tuberculosis that he had expected to follow in the wake of the epidemic.

Dr. Frederic T. Lord discusses a case of lung abscess cured by operation.

The medical treatment of peptic ulcers is outlined very comprehensively, with illustrative case reports and diet lists, by Dr. Franklin W. White.

Dr. James P. O'Hare reports a case of nephritis with edema in which the metabolic studies were followed and tabulated for thirteen months.

A group of soldiers discharged because of cardiac conditions furnish material for a discussion by Dr. Francis Peabody.

Dr. George C. Shattuck gives a clinic on a variety of medical cases, outlining the steps by which his diagnoses are reached.

The term "ptomain poisoning" has become a cloak for ignorance, and Dr. M. J. Roseaux gives the results of his investigations on cases so diagnosed. He found the most frequent cause of the symptoms to be bacterial infections of the bacillus enteritidis, though chemical poisons, anyphylaxis and a number of other causes have been found, upon investigation, to account for the gastro-intestinal symptoms. "Ptomain" is a term for a chemical substance of uncertain origin, unknown nature and doubtful existence and should be avoided in diagnosis.

Dr. Charles J. White gives a very helpful discussion of about two dozen of the common skin diseases presenting difficulties in diagnosis and treatment to the general practitioner. Formulæ for local and internal use are given in detail.

The importance of giving enough calcium in the food to prevent rickets is emphasized by Dr. Fritz B. Talbot.

Dr. John Lovett Morse presents a severe case of infantile scurvy with a discussion of the disease and its treatment.

Three cases of nephritis in children, one of acute hemorrhagic nephritis, one of mild chronic nephritis without symptoms, and one of nephritis with hypertension, are reported by Dr. Lewis Wedd Hill.

Dr. H. Lilenthal tells of the practice of industrial medicine, presenting many cases in which the cause of complaint was found in industrial conditions or poisons.

A discussion of multiple diverticulitis of the colon from the *x*-ray standpoint is given by Drs. Arial W. George and Ralph D. Leonard. It is illustrated by many *x*-ray plates and followed by a voluminous bibliography.

—Olga S. Hansen.

The Health Officer. By Frank Overton, M.D., D. P. H., Sanitary Supervisor, N. Y., State Department of Health, and Willard J. Denno, M.D., D. P. H., Medical Director of the Standard Oil Company. Octavo of 512 pages with 51 illustrations. Philadelphia and London: W. B. Saunders Company, 1919. Cloth, $4.50 net.

This is a very timely and complete manual, written by men of authority and long experience, and is apparently up to date in every particular. The work is intended primarily, for the health officers of America, now num-

bering many thousands, but it should be read carefully by every medical man or layman who is acting, or expects to act, in an official capacity on boards of health, and also by public nurses, teachers, social workers, that is, all whose calling requires them to know the essentials of preventive medicine.

With an apology for the personal note: My good father, Dr. W. H. Leonard, gone to his rest more than twelve years ago, for twenty-five years a member of the Minnesota State Board of Health, predicted over thirty-five years ago that preventive medicine was the coming field for medical men.

That day is now here, as the flood of literature upon hygiene, social improvement, health activities, and preventive medicine testifies.

The United States Public Health Service gives out every week the results of research along special and general lines. Prophylaxis has become a watchword with Mr. Forcheimer and many others, and works upon public hygiene abound. But of all that have come to our notice this book covers the greatest range, at least touching upon all essentials, and does so in a refreshingly untechnical and plain-spoken manner. It does not, and should not, require a high medical training to grasp the alphabet of prevention of good health, as any one interested in like matters may learn by a thorough reading of this book.

The authors naturally follow very closely, and frequently refer to, the New York health code, which is one of the most complete among the states, a model for the more backward commonwealths to imitate.

Whole chapters are devoted, in a most rational way, to the qualifications of a health officer, the relations of the same to the public and to physicians; of the public to the health officer, statistics, records and reports; publicity and education, bacteriology, epidemiology, public health nursing, and the communicable diseases, the more important ones in full separate chapters, etc.

From the more technical sanitary standpoint are chapters on Milk, Food Sanitation, Food Values, Sanitary Engineering, Nuisances, Sewage Disposal, Water Supplies, Ventilation, Industrial and Child Hygiene, etc.

The chapter on Mental Defects seems out of place in those states where such matters are under other jurisdiction than the health departments, but it contains much valuable information. Probably the estimate for New York of 1 per cent mentally abnormal or deficient is not too great for the whole country, and such condition forms one of the most pressing problems in the field of preventive medicine.

A chapter of seventeen pages, entitled "Vermin" details the part played by flies, mosquitoes, lice, bedbugs, ticks, fleas, and rats in conveying disease, with all the modern methods of prevention.

The eighteen-page chapter on "Immunity," while containing nothing new to the well-read physician, puts the facts of modern medicine in such plain untechnical language that any intelligent person can grasp the idea, and see the relation between proper personal hygiene and good health. In another place the authors sum up the whole matter by saying, "The essential preventive measures are included in the rules of good manners and politeness," or, as was enjoined upon the inspectors in the Minneapolis Health Department when I was on duty some years ago, "The rules of the Health Department are only specific extensions of the Golden Rule, and should therefore appeal to all thoughtful and sensible people."

While this book of 506 pages contains much of value and absorbing interest to those who are striving to improve the race and give those of future generations far better chances of living long and happily, many of its suggestions are ahead of the time. The authors must be content to see their ideas carried out only after years of popular education, for the inertia of ignorance and prejudice is to be overcome only in painfully slow processes.

Typographically the book is in Saunder's best form with occasional apt and graphic illustrations.

—Wm. E. Leonard.

NEWS ITEMS

Dr. J. E. Corrigan has reopened his hospital at Spooner.

Dr. G. F. Pugh has moved from Wallace, S. D., to Florence, S. D.

Dr. R. J. Sewall, formerly of Minnesota, has located in Cartago, Calif.

Dr. M. B. Ruud has moved from Alexandria, Minn., to Grand Forks, N. D.

Dr. C. L. Olson, of Pine Island, has sold his practice to Dr. E. F. Lundquist, of Minneapolis.

Dr. R. L. Laney, of Browns Valley, has sold his practice to Dr. G. E. McGeary, of Minneapolis.

Dr. Thor Moeller, of Devils Lake, N. D., has returned from army service, and resumed practice.

Dr. W. C. Wilson, of Grand Forks, N. D., has completed his army service, and will resume practice soon.

Dr. G. A. Holm, who recently returned from two years in service, has located at 401 Central Ave., Minneapolis.

Dr. Alexander Josewich, of Minneapolis, has returned from two years of service at Camp Bowie, and has resumed practice.

Dr. R. E. Spinks, of Middle River, has purchased the old school building of that place, and will remodel it for hospital uses.

Dr. E. V. Gustuson, formerly of Milton, N. D., after several months' special work in Chicago, has located in Fargo, N. D.

Swift County, Minn., proposes to erect at Benson a hospital as a memorial to the men of the County who served in the World's War.

The contract for a men's ward building at the State Hospital for Insane at Jamestown, N. D., has been let. It will cost about $150,000.

Dr. L. G. Dunlop, of Bismarck, N. D., is home

after fifteen months in army service. Dr. Dunlop is on the staff of the Bismarck Clinic.

Dr. A. L. Doe, of Bowbells, N. D., who recently sold his practice to Dr. J. D. Fuller, formerly of Plaza, N. D., will move to California.

Dr. R. W. Mullen, formerly of Florence, S. D., is home from army service. Dr. Mullen attained the rank of major. He has located in Sioux Falls.

Dr. H. E. Bank, formerly police surgeon of St. Paul, now in the navy, was recently married in Paris to a French girl. He is expected home soon.

Three of Williston's (N.D.) medical men saw service in France, and are now at home. They are Drs. C. S. Jones, F. W. McManus, and H. T. Skovholt.

Dr. C. E. Buswell, of Minneapolis, has gone to China, where, as a medical missionary of the Presbyterian church, he will have charge of a hospital in Shantung.

Dr. F. D. Gillis, of Mitchell, S. D., has returned from the work in the reconstruction Hospital at Fort Snelling and has resumed his practice in Mitchell, S. D.

Dr. Axel F. Blomburg, of Minneapolis, died last week, at the age of 52. He was a graduate of Hamline, class of '97, and had practiced in St. Hilaire and Minneapolis.

The Commercial Club of Mayville, N. D., has contributed $600 toward any deficit that may occur to the Mayville Hospital within a year if it is reopened, as it probably will be.

Dr. Christian Christensen, of La Crosse, Wis., died last week at the age of 67. Dr. Christensen had practiced in La Crosse for thirty years, and was well known in southern Minnesota.

The Lakeside Hospital of Kenmare, N. D., is to be enlarged. The enlargement will give the hospital a capacity of seventy patients, with ample quarters for the staff and assistants.

The United States Public Health Service has just published a little book called "The Safe Vacation," designed as a guide in the selection of a summer resort—probably *next* summer.

Dr. W. C. Chambers, after thirteen months in medical service, has resumed his practice at Blue Earth. While at Camp Merritt Dr. Chambers attended many special clinics in New York City.

Dr. W. J. Cochrane, who has practiced a number of years at Lake City, has moved to Minneapolis, and has offices at 609 La Salle Building. He will limit his practice to eye, ear, nose, and throat work.

In the National Tournament of Modern Health Crusaders, conducted by the National Tuberculosis Association, from February 9 to May 24, 111 schools got a perfect record, and 51 of them were Minnesota schools.

Pipestone has accepted the gift of $50,000 for a memorial hospital made by one of its citizens, Mr. Oscar E. Ashton, in memory of his father. The city and county will contribute to the cost of grounds and equipment.

Dr. C. E. Matlock, formerly of Missouri, who has been doing extensive *x*-ray work in the army, has formed a partnership with Dr. W. F. Bushnell, of Elk Point, S. D. The two physicians worked together in the Base Hospital at Norfolk, Va.

We again urge physicians who are coming to Minneapolis for the meeting of the State Medical Association, October 1-3, to make their hotel reservations at their favorite hotels. The meeting promises to be one of great interest in its scientific program.

It is said that Dr. W. H. Witherstine, of Grand Forks, N. D., has the distinction of having made the first professional call in an airplane made in North Dakota. He went from Grand Forks to Inkster to perform an urgent operation. The forty-five miles was made in thirty minutes.

Dr. J. M. Stewart, of Mitchell, S. D., died last month at a sanitarium of carcinoma of the stomach. Dr. Stewart had practiced for more than fifty years, thirty-seven of which he practiced in South Dakota. He was a veteran of the Civil War, and served as a hospital steward during the entire war.

Dr. E. W. Jones, of Mitchell, S. D., a captain in the Medical Corps, has resumed his practice in Mitchell, S. D., after an absence of nearly two years in the service. Dr. Jones was in France for seventeen months and was at the front for six months. He was cited for bravery in the work at Chateau-Thierry, and was wounded during this campaign.

Our list of Minnesota medical men who reached the rank of lieutenant-colonel is not yet complete, and perhaps will not be until our readers make it so. A friend of two Minneapolis men who reached the rank of commander in the Navy, which is equivalent to lieutenant-colonel in the Army, has sent us their names, Drs. C. E. Henry and C. C. Tyrrell. Only about fifty physi-

cians in the Naval Reserve Force received the rank of commander.

Dr. Christopher Graham, who has been a member of the Mayo firm for many years, and the principal diagnostician of the Clinic, has resigned from both positions, and will endeavor to enjoy the rest to which his long service entitles him. Dr. Graham is universally respected by the medical profession, in and outside of Minnesota, and is beloved by a great host of friends both at home and abroad.

The Minnesota State Board of Health did not select Dr. Bracken's successor as executive officer of the Board at its last meeting. The appointment will probably be made early next month. Dr. C. E. Smith is acting executive officer. Dr. Bracken's retirement comes after a service of over twenty years on the Board, during which time the State has gained a very high record for the efficiency of its health work.

The Upper Mississippi Valley Medical Society met at Brainerd last month. Papers were read at the meeting by Dr. H. G. Collie, of Brainerd, on "Mitral Diseases"; Dr. J. de J. Pemberton, of Rochester, on "Blood Transfusion"; by Dr. Walter Courtney, of Brainerd, on "Retrospective," and by Dr. R. A. Beise, of Brainerd, on "Treatment of Fracture of the Femur in Infants." A free discussion followed the reading of the papers. Dr. John A. Evert, of Brainerd, for many years secretary of the Society, offered his resignation, and Dr. P. L. Berge, of Brainerd, was elected secretary.

POSITION AS OFFICE ASSISTANT TO PHYSICIAN OR DENTIST

A registered nurse with five years' experience desires a position as assistant to a surgeon or dentist. Address 275, care of this office.

LOCUM TENENCY WANTED

A physician of experience who has been in war service and can give the best of references, desires temporary work as locum tenens. Licensed in Minnesota. Address 271, care of this office.

MINNEAPOLIS SANATORIUM FOR RENT

A sanatorium in a nice residence district of Minneapolis is offered for rent. It is three blocks from two car-lines, building is sunny and quiet, has a good heating-plant, enclosed front porch, and awnings on west side. Wish to vacate Oct. 1. Rent reasonable. Some of the furnishings can be purchased, if wanted. Information can be obtained by appointment through this office. Address 279, care of this office.

SURGICAL INSTRUMENTS, ETC., FOR SALE

A complete set of surgical instruments, a fine operating table, and an electric battery are offered for sale cheap. Address P. O. Box 23, Hazelton, N. D.

ASSISTANT PHYSICIAN WANTED

Assistant physician for mining contract practice in Minnesota. Must be graduate of Class A college. Salary, $225 to start with. Early increase to the right man. Give full information in first letter, with photo. Address 270, care of this office.

PHYSICIAN WANTED

A physician is wanted to locate in a live town in North Dakota. Good schools and churches, electric lights, etc. Cost of living low. For particulars address, A. Stevenson, Secy. Commercial Club, Arthur, N. D.

POSITION AS TECHNICIAN WANTED

With a physician or a firm of physicians, or a clinic in or outside of the Twin Cities. Being a registered nurse, applicant can assist, when needed, in office operations. Address 277, care of this office.

PHYSICIAN WANTED AT ONCE

A good doctor is wanted to locate in a small Minnesota town, with the nearest doctor 20 miles away. Large surrounding territory. This is a splendid opening for a young man. Address Andrew W. Clay, Grygla, Minn.

POSITION AS TECHNICIAN WANTED

Lady technician desires position in laboratory of physican or group of physicians. Some experience in *x*-ray work. Conscientious worker. Prefers Twin Cities, but will accept position elsewhere. Available after Oct. 1. Address 281, care of this office.

DENTIST WANTED

A small prosperous village, with electric lights, waterworks, excellent schools, and a large and prosperous territory, needs a dentist. A good income is assured from the start. Excellent office rooms can be rented reasonably. For full information address Dr. W. E. Wray, Campbell, Minn.

POSITION WANTED AS WOMAN'S COMPANION

A woman (aged 34) desires a position as the companion of an elderly woman or an invalid, preferably in travel. Has had considerable experience in nursing, and is in excellent health. Can make herself useful in many ways. Only moderate salary expected. Address 278, care of this office.

HOSPITAL SUPERINTENDENCY WANTED

Wanted, a position as superintendent or assistant superintendent or manager of a hospital by a Hospital and Religious Work Secretary of the Army Y. M. C. A., who has been a year and a half in "Y" work at one of the larger general hospitals of the army. Is a college graduate and teacher, and otherwise well qualified. Knows how to handle people tactfully, and has the best of references. Address

PUBLISHER'S DEPARTMENT

SAL HEPATICA

Among the "Six Big Sellers" Sal Hepatica has stood near the top, not simply for one month, but for many years. If it has reached this enormous sale without merit, then the people must indeed be poor judges of the value of remedies long prescribed by physicians. Who will believe it?

THE TRI-IODIDES (HENRY)

The Henry Pharmacal Company claim for their Tri-Iodides only what physicians may expect to obtain from the combination of drugs in such preparations. The company sends free a large $1.50 bottle to any physician who will pay the carrying charges, and such a supply is sufficient for the physician to satisfy himself of the merits of the remedy. A book on the Tri-Iodides will be sent free upon application to the Henry Pharmacal Co., St. Louis, Mo.

MELLIN'S FOOD

A scientifically compounded food is an absolute necessity in modern life, for both infants and invalids, particularly for the former when deprived of mother's milk.

Such a food is Mellin's. Its formula is given, and it complies with the requirements of modern investigation in the digestive and assimilative powers of the stomach, both in health and sickness.

Mellin's Food is a credit to its manufacturers, and is always safely prescribed.

LISTERINE

Listerine is confidently recommended by its manufacturers as a most excellent remedy for the acute intestinal infections of children, and the company has issued an interesting and informing pamphlet upon this subject, which they are glad to send to physicians who apply for the same.

Listerine is the best known of the antiseptic solutions used as a medium in administrating other drugs, and is compatible with almost every other medicinal agent.

It is always safe and agreeable.

GLYKERON AND GLYCO-HEROIN (SMITH)

Glykeron and Glyco-Heroin (Smith) are synonymous appellations, and are now known as such to all dispensing pharmacists.

These names may now be used interchangeably by the physician when prescribing what was originally known only as Glyco-Heroin (Smith).

Glykeron is the more distinctive appellation and affords the physician a greater measure of protection against confusion on the part of the dispensing pharmacist when this preparation is prescribed for cough, bronchitis, pneumonia, phthisis, whooping-cough and kindred affections of the respiratory system.

THE CHICAGO LABORATORY

The high-grade laboratory is doing a far greater work than the mere routine of examining specimens sent to them. They can reduce this work to a degree of scientific perfection; and they have made a study of the meanings of their findings, which, together with the bedside work of the physician, gives us the exact diagnosis of the scientific medical man of today.

This information is, of course, free to all physicians, both in a general way and, specifically, in the individual case, for the laboratory director, educated to his work, is an excellent interpreter of the pathological findings and gives his advice freely. This is particularly true in the work of the Chicago Laboratory, of which the three departmental directors are physicians of high standing.

It is worth while to know these men and this laboratory. For full information of the work of the laboratory, address the Chicago Laboratory, 25 E. Washington St., Chicago.

ST. JAMES HOSPITAL AND SANITARIUM

We believe no other hospital and sanitarium in Minnesota has ever fallen into possession of a building so desirable in a city so attractive as St. James. This combination promised this institution success from the day it opened several years ago, and such it has been.

Relieved of the burden of a big fixed overhead expense, in the form of rental or interest on invested capital, the management was able to make moderate rates and to spend money freely in equipment. These things have been done, and have brought their reward.

St. James Hospital and Sanitarium is doing excellent work and large service. The resident physician, Dr. Graham M. Lisor, invites correspondence and free inquiries from all interested physicians.

THE ILLS OF SUMMER-TIME

"Somewhere some one has written that summer-time is suffer time." And the phrase applies particularly to those mucous membrane irritations that, while annoying to say the least at any time of year, are aggravated and rendered more active during the heated term. Micajah's Wafers should be kept on hand by the practical physician, because they are particularly adapted for the treatment of irritation, inflammation, and resultant hypersecretion of mucous membranes, particularly those of the genito-urinary tract. The wafers are astringent, antiseptic, non-irritant, soothing and healing. They dissolve readily in water, or can be used as wafers. Pulverized, they make an efficient dusting or dressing powder in skin irritation, chafes, etc. What is true of the wafers is also true of the Suppositories, which will be found particularly useful and gratifying by sufferers from hemorrhoids during hot weather, when the local condition is quite apt to be aggravated and irritation or inflammation increased.

Samples and literature of both Wafers and Suppositories will be sent only to physicians on request to Micajah & Co., Warren, Pa.

BENETOL—A NON-POISONOUS GERMICIDE

Benetol is a drug whose chemical name, which is printed on every container, gives the physician or surgeon specific information as to its qualities. In the advertisement of Benetol, to be found in this issue, "13 points" of its good qualities are named and may be depended upon.

The bacteriological table, as made out by men of the highest professional reputations, found in the advertisement, is of great interest. It shows the values of the three principal germicidal agents in general use, and the accuracy of its figures can hardly be questioned.

The Benetol Company will gladly send a generous quantity of Benetol and Benetol accessory products to any physician who may wish to give them a trial.

BETHESDA HOSPITAL, ST. PAUL

Bethesda Hospital is conducted in the interests of the public by a group of high-grade men and women working as public servants, who know the value of an efficient hospital, and especially a hospital with a staff of high-grade physicians unhampered in their strictly professional work.

Bethesda Hospital is centrally located in St. Paul. The Rev. J. A. Krantz, D.D., its superintendent, will cheerfully give the fullest information concerning its work.

THE NEW MULTOSCOPE

The new factory recently purchased by the Wm. Meyer Company, of Chicago, Illinois, is working to its utmost capacity to supply the new Multoscope, which is meeting with so much favor with the röntgenologists throughout the country. This, with the well-known line of transformers and other *x*-ray accessories which they manufacture, is being adopted and purchased by several of the larger hospitals in the Twin Cities and surrounding territory. This apparatus is said to offer today greater simplicity and convenience of operation than any other similar one now on the market. It has many exclusive features, subjects of patent application, well proving it to be a distinct advance.

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OTOLARYNGOLOGY AND THE MORTALITY-RATE*

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Appreciation of values is a mark of the well-balanced education which is so necessary to the modern physician. A wide range of knowledge may be possessed, but sound judgment is to be expected only from those who have developed this capacity for appreciation. It is this judgment on which the patient relies when he places himself in the hands of the physician, trusting, not only in his skill to do what needs to be done, but, more especially, in his judgment as to what ought to be done, and when.

In an age of specialism it is not strange that enthusiasm along the lines of the physician's special interest should, to some extent, bias his judgment. To correct this tendency there is need of the spirit of open-mindedness, which makes one ever-willing to readjust his position with the new developments of knowledge.

While the otolaryngologist must freely confess his tendency to provincialism, during the past decade or two he has been rapidly correcting this fault. Perhaps no single factor in this regard has been so potent as the development of our knowledge of focal infection, and an appreciation of its importance in the cause of disease. He can no longer justly be criticized as being a mere tinker of anatomical trifles or an adept in surgical fancy work. Otolaryngology has made valuable contributions to general medicine which should be appreciated far more than they have been.

This paper has been prepared with the purpose in view of emphasizing the importance of otolaryngology by calling attention to the large proportion of the mortality-rate with which it is directly or indirectly concerned.

The future of medicine lies in the prevention of disease, not only by preventing the spread and development of communicable disease, but by the early recognition and prevention of those conditions which contribute so largely to the death-rate in middle life from renal, heart, and other circulatory diseases. The Census Bureau calls attention to fact that 20 per cent of the deaths are due to cardiac or renal diseases, 10 per cent to pneumonia, and 10 per cent to tuberculosis. Adding to this list at least another 10 per cent due to other circulatory diseases, the exanthems, meningitis, etc., we have more than half of our mortality.

In this group the direct infections practically all enter through the upper air-passages, and of the others which are now recognized as having their origin in focal infections, the great majority are concerned with avenues of infection which are the special domain of the otolaryngologist. Obviously, if medicine is to exert any serious influence in reducing this mortality-rate it must take into account the field of otolaryngology.

The normal functions of the nose are concerned with the preparation of air for entrance into the lungs. This involves, first, the process of filtration, whereby the air is deprived of most

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of the suspended particles of dust. The importance of this function in civilized communities where, owing to close contact, dust is inevitably laden with infectious material, can hardly be overestimated. Civilization brings with it penalties, as well as advantages, and this excessive exposure to the infectious discharges of neighbors, whether in the form of moist mouth-spray or dessicated sputum in the form of dust, is one of the great penalties of progress. The long-continued assault upon the nasal mucosa made by the armies of germ-laden dust particles inevitably leads to breaches in the defences. The result is that civilized man may be regarded as having universally more or less chronic infection of the nasal mucous surfaces.

Another important function of the nose is that of warming and moistening the air. It is an almost universal custom of inhabitants of the temperate zones to shut themselves up during the long cold season of the year in houses which are overheated and excessively dry. Here, again, we have another source of irritation to the nose with a resulting engorgement of the tissues and an exudation therefrom which, unlike normal nasal secretion, is a culture medium rather than a natural antiseptic.

Extension of surface infection into the labyrinthine cavities of the nasal accessory completes the investment of our first line of defences against bacterial invasion.

We have now to deal with well-established infection within body tissues. The effect of the prolonged irritation naturally results in a permanent hypertrophy, so that the lumen of the nose is reduced or entirely obliterated, and the great defensive organ of the body has been crippled or put out of commission.

Were this all, our status post bellum would not be so bad; but, in addition to our loss of defence, we still have to deal with the army of the invader, well intrenched in very inaccessible cavities within the sinuses, pouring forth a continuous fire of fresh infection, going ahead with further destruction of invaded territory, and at times nearly overwhelming the whole organism with acute exacerbations.

Mouth-breathing, which is enforced by nasal obstruction, exposes the throat to the direct irritation of dry, unwarmed, and unfiltered air. Naturally, the tonsils exposed to such irritation speedily become infected, and, within their crypts, and underneath the folds of the plica and the pillars, are retained focal masses of infection, added to the enormous bacterial flora which accumulates about the teeth, and is nourished by food particles that are picked up during mastication.

The whole lymphatic ring of Waldeyer becomes more or less involved. Infection carried down into the bronchi becomes absorbed into the peribronchial lymph-nodes. The cervical glands become enlarged from a similar absorption from the lymphoid structures of the throat. Infection extending through blood- and lymph-channels may find entrance through the cranial walls, and produce meningitis. Extension of infection to the middle ear, so often encountered in the exanthemata and following acute nasal infections in general, brings in its wake mastoiditis and intracranial infections, such as brain abscess and meningitis. Bruehl states that otitis media carries a 2.5 per cent mortality.

The swallowing of infected discharges which goes on constantly is an important factor in intestinal intoxication.

While the varieties of infection are extremely numerous, we are chiefly concerned in the influence of otolaryngology upon the death-rate from tuberculosis, the pneumococci, the streptococci, and the staphylococci, together with diphtheria,—the filterable viruses thought to be the causes of coryzas and certain of the exanthems, and m. catarrhalis. Of this group the most important are tuberculosis, the pneumococci, the streptococci, and the staphylococci. In tuberculosis, otolaryngology is involved in the nasal obstructions which deprive the body of that filtering function which is, as before stated, the "first line of defence" against infection. The mouth-breathing child is an easy mark for tubercular infection during the period when he is most susceptible. Intranasal obstruction accomplishes the same result later on in life, with the added danger of mixed infection, which, added to an already developed tuberculous infection, becomes so destructive of human life.

Infected tonsils, permitting absorption into blood and lymphatic channels further hamper the tuberculous patient's chances for recovery. It is not putting it too strongly to state that the tuberculous patient does not have a fair chance at recovery, or at least not the chance he might have, until his need of fighting secondary infection, from sinuses, tonsils, and teeth, has been reduced to a minimum.

Pneumonias, rivalling tuberculosis as destroyers of human life, while still a matter of debate

as to the details of their bacteriolgy, are known to be in a great measure due to the pneumococci and their allies, the streptococci and the staphylococci. The fact that nearly everyone harbors the pneumococci and streptococci in his mouth and nasal secretions brings us face to face with the part otolaryngology has in deaths from "the Captain of the Men of Death."

It has often been argued that we need not consider the pneumococcus so seriously, for it is found in practically all "healthy mouths." This would seem to be an utterance voiced from that familiarity which breeds contempt.

However, since the development of our knowledge of the transmutation of pneumococci and streptococci, as shown by Rosenow, and the experience of the great influenza epidemic, which seems to show that the transfer of an apparently harmless strain of pneumococci from one group of men to another, as happened in training camps, results in a high degree of virulence, we must recognize the danger of the pneumococcus and its relative the streptococcus.

The reduction of the pneumonia mortality must take into consideration the elimination, as far as possible, of known breeding places of the pneumococcus and the streptococcus.

Again, the field of otolaryngology is concerned. The retaining of infected sinuses and tonsils is an invitation to this type of infection on the part of the individual or a menace to those who come in contact with his mouth-spray.

That 20 per cent of the mortality is due to cardiac and renal diseases is a tremendous fact, which has enlisted the interest of the profession as perhaps no other thing has ever done. The fact that these diseases are largely developed through the effects of focal infections, calls for a brief statement of the pathology for the purpose of emphasizing the importance of the field of otolaryngology in their cause. The presence of foci of infection in such regions as are not susceptible of thorough drainage, favors the absorption into the circulation of the germs which are present. These germs have a specific affinity, which is developed for different tissues, and when carried by the blood-stream to a suitable habitat, develop there a lesion. There is an infiltration of leucocytes. Hemorrhages occur into the tissues, the thrombi which are formed within the vessels become good culture grounds, and emboli spread therefrom, carrying foci to other regions. Among the great variety of lesions which have been traced to these focal infections may be mentioned endo-, myo-, and peri-carditis, neuritis, arthritis, myositis, appendicitis, cholecystitis, gastric ulcer, arteriocapillary fibrosis, nephritis, and other visceral lesions. The big problem of the prevention and cure of this group of diseases is directly concerned with the elimination of foci of infection. Experience has shown that by far the greater number of these foci are to be found in the head: in the teeth, the tonsils and the nose, and its accessory sinuses. Here, more than anywhere else, the field of otolaryngology is involved, and its importance can hardly be overestimated, even by an enthusiast.

That the teeth play a very important part in these focal infections is not to be minimized. No one can be acquainted with the remarkable work of Hartzell along these lines without appreciating the importance of the teeth. If the teeth, accessible as they are to examination, are so often overlooked, as pointed out by Hartzell, how much more so are those structures of the nose and throat which are not so easily examined. The faucial tonsils are the most easily examined of any of these structures, and yet how often they are passed by with a superficial examination, consisting of a single glance over a tongue-depressor. The so-called "slaughter of the tonsils" is not without its good side, for the wholesale removal of tonsils, good, bad, and indifferent, undoubtedly results in the removal of many infected ones which might otherwise be missed.

A thorough search of foci of infection within the nose is by no means a simple affair, yet here, as already mentioned, is the finest possible opportunity of all for the collection and retention of infection. More exposed than any other part of the body to the direct and constant irritation of infectious material, it becomes very early in life the site of chronic infection. The researches of Warren Davis have shown us that the sinuses are developed much earlier in life than was formerly supposed, and even in early infancy we may have developed an involvement of the ethmoid cells.

Nature has provided in these many chambered labyrinths a place which is at once easily infected by extension from the nasal passages, and so difficult of drainage as to make it an ideal location for the retention of infected foci.

To pass by this region in our efforts at the location of infected foci without a most careful examination is inexcusable. The use of anterior and posterior rhinoscopy, together with the electrically lighted nasopharyngoscope will enable

one skilled in such examinations to discover the presence of the hypertrophies, polyps and discharges of pus which tell the tale if found. Their absence at the time of examination, however, is no guarantee that there is no focus of infection persent, and this has without doubt led to the belief that focal infections of the sinuses are relatively less important than they really are. Repeated examinations may be necessary. The presence of a hyperplastic ethmoiditis must suggest to the careful observer the possibility of small foci within the ethmoid which have no outward drainage, just as is the case in apical abscesses of the teeth. Skiagraphs are of great value, but when negative are not conclusive evidence of the absence of foci.

All this argues for the need of the services of the skilled otolaryngologist in making the systematic investigation which is imperative in locating, so far as is possible, all foci of infection. It may be even necessary, as reported by the writer in another paper, to make an exploratory examination of the sinuses to settle the problem.

What is true of the ethmoid cells, as stated in the foregoing, is of equal importance as regards the maxillary, sphenoid, and frontal sinuses.

Another cavity which receives nowhere near the consideration which is its due is the middle ear and mastoid. With a death-rate of 2.5 per cent, as stated by Bruehl, otitis media and its sequelæ cannot consistently be ignored. The great danger from mastoiditis, sinus thrombosis, and intracranial involvement which may occur in any case of middle-ear suppuration, should call for the most careful attention to these conditions. As a focus of infection a chronic suppurating ear is a menace which must not be forgotten. And yet, in spite of the well-known fact that these running ears are a bar to active military duty and a bar to life insurance, how many of them are neglected!

In all these conditions above mentioned in which the field of otolaryngology is concerned, the same surgical principles of treatment are involved: removal of the infected foci and thorough drainage. It is here that the services of the otolaryngologist are of the greatest value in helping to reduce the mortality-rate in a group of diseases which cause half of our deaths.

Failure to secure all the benefit which may be obtained from surgical treatment of the foci which have been discussed may in a great measure be traced to a lack of thoroughness in the work, or a lack of appreciation of the relative importance of these foci. The failure to remove all of an infected tonsil, either through faulty technic or through an oversight which may happen to a skilled operator, may still leave enough diseased tissue to keep up the disturbance for which it was operated on. In this connection it is well to bear in mind the influence of protein sensitization, which may come from a very small focus whose actual number of bacteria entering the circulation would be very small.

It is too often the case that nasal work is limited to the mere lopping off of a bit of turbinal tissue without even entering the underlying sinuses, where the real source of infection lies. The otolaryngologist, to be of any real service in attacking a nasal infected focus, must be prepared to do anything in the field of sinus surgery which may be discovered as he progresses.

SUMMARY

Fully 50 per cent of all deaths are due to tuberculosis, pneumonia, and renal, cardiac, and circulatory diseases, together with meningitis and a few acute infections, all of which are directly or indirectly concerned with the entrance of infection, which gains access through the nose and throat.

The nose is especially adapted for the reception and retention of infection. Resulting hypertrophies impair or destroy its protective function of filtration of inspired air.

Accessory sinuses, developed in early infancy easily become infected, and act as pockets for the retention of infection. Discharges from this source cause secondary infection in tuberculosis. The presence of chronic pneumococcic, and streptococcic, and staphylococcic infections makes it possible for pneumonias to develop under favorable conditions.

Middle-ear infections are nearly all secondary to nose and throat infections, and, with mastoid and intracranial complications, carry a 2.5 per cent mortality.

Focal infections, so largely responsible for the death-rate in middle life from cardiac, renal, circulatory, and organic diseases, are extensively found in the tonsils, the nasal accessory sinuses, and the ear.

The expert services of the otolaryngologist are needed to determine the presence of focal infections, in the sinuses especially, and his skilled technic should be required for the thorough re-

moval and drainage of focal infections which are found within his field of work.

DISCUSSION

Dr. J. M. Walsh (Rapid City): What Dr. Parsons said in speaking of the sinuses and of infection, particularly in lowering the vitality and general resistance of the entire body, cannot be emphasized too much. It has been my misfortune to have a peculiar run of cases of asthmatic conditions which were traceable to infected sinuses, and following early drainage of these sinuses the patients were afforded decided relief.

Regarding infections: If the matter of acute diseases in children were worked out to any great extent, I am sure there would be some surprising statistics developed. I hope some day those who have access to the large hospitals for children will check up infections in the nasal passages, and determine the important part they play in children contracting infectious diseases. Why is it in such a large percentage of children who develop these acute diseases we always find this trouble? I dislike to make the statement, but I think you will find post-nasal or some sinus infection in seven children out of ten who have had scarlet fever and various other diseases. Does not that bring out the fact that the little fellow with a good nasal passage does not have these infections? I think that point will bear looking into.

Dr. L. N. Grosvenor (Huron): I think the paper of Dr. Parsons is remarkably good in bringing out the points of the causative relationship of the nose and throat and ears with the general condition.

A year or two ago at Sioux City, we got Professor Lee Wallace, Dean of the Medical Department of the Iowa University, to give us a paper. He presented a remarkably fine report on a study of sinus conditions in children that presented themselves at the University Clinic. There they have developed a thorough organization, their co-worker, the Professor of Children's Diseases, was finding children sick in whom he could not find any reason for their trouble. He sent these children to Dr. Dean who went over them in the usual way, and at first he sent them back. The Professor of Pediatrics again sent them back to Dr. Dean with the request that he go over them more carefully, and try to find out the source of trouble. The Professor of Pedriatrics pointed out that these diseases were due to some cause or focus of infection. The nasopharyngoscope and the laryngoscope were used, and very careful and thorough work was done, so that they could see all there was to see inside the nose. They could not see all the sinuses, but they could see the turbinates and the surrounding regions. In a series of 100 cases in children they found infections in the nose and throat, and so on, and as a result of this investigation a fine report of splendid research in that line was presented.

And so the paper of Dr. Parsons presented today emphasized the importance of searching for and trying to find out by a thorough differential diagnosis and examination of these cases the cause of the trouble. There are a lot of nasopharyngoscopes made but they are not frequently used. We ought to use them more frequently than we do, and, if we did, we should get better results in making diagnoses, and consequently should do better work when it comes to the treatment of this class of cases.

Dr. R. D. Alway (Aberdeen): Dr. Parsons' paper is certainly an excellent one, and the doctor is to be congratulated on covering the subject as thoroughly and as skillfully as he has done. He has brought out ideas that many of us have known for some time, if we only think of them.

In sitting here I was reminded of the condition of the English Army as the wonder of the war. They got a great lot of cases of pneumonia among the boys in the trenches, with a high rate of mortality, and they finally came to the conclusion that the men who had good noses and good throats were not nearly so susceptible to pneumonia as those who did not have normal noses and normal throats; therefore they immediately issued an order not to send the men out of English camps until their noses and throats were cleaned up, and the mortality was materially reduced.

Dr. Walsh spoke of asthma as being due to sinus disease. That is something that has been brought out within the last few years, and Dr. Matthews of Minneapolis has been doing some special work along that line. I know of a few patients in my own practice that I have been able to relieve of asthma permanently, so far as I can tell now, by taking care of the infected sinuses. I think we often have sinus trouble in children, especially ethmoidal and antral trouble, that we do not diagnose, and which we frequently drain by removing the tonsils and adenoids. I believe most of these cases clear up entirely by removing the hypertrophied tonsil, and especially hypertrophied adenoids (if they have not reached the chronic stage of infection), and thus allowing the sinuses to drain.

Dr. H. I. Lillie (Rochester, Minn.): This is a very excellent paper, and I have enjoyed it very much. I think, as a rule, the general diagnostician is coming around to see the importance of the work of the otolaryngologist in connection with focal infections, and I think it is the province of the otolaryngologist to be particularly careful in eliminating foci of infection in the ear, nose, and throat, and work in co-operation with the internist. The tonsil particularly may be the primary focus of infection. There may be secondary foci as a result of the primary infection, and the patient may still have symptoms. If we work in co-operation with the internist, the general diagnostician, we shall get somewhere to the advantage of the patient and to ourselves.

The diagnosis of accessory sinus disease, as Dr. Parsons has pointed out, is difficult and frequently requires repeated examination.

It is difficult to diagnose accessory sinus disease in children. The ethmoid, in my judgment, is more difficult to deal with because there is no regular number of ethmoidal cells in the labyrinth, and when one thinks he has completely exenterated he finds the diseased process does not clear up, and frequently he finds one or two other cells and then the diseased process clears up.

I wish to thank Dr. Parsons for the opportunity of hearing what he had to say regarding the otolaryngologist in general diagnosis and the great benefit he can do his patients and help out as general diagnostician. What he has said in that regard is well taken, and, instead of working separately and pulling against each other, if we work in co-operation, we shall get somewhere. That is true in all medical diagnosis.

Dr. C. C. Gross (Yankton): I was very much inter-

ested in Dr. Parsons' paper. He has done a great service in emphasizing the necessity of impressing on so many of us the importance of chronic diseases.

Just before Dr. Grosvenor called attention to Dr. Dean's work, I recalled a case the doctor did not mention in his paper, and I think possibly Dr. Grosvenor had overlooked. It was a case of arthritis, if I remember correctly, in which the patient had been referred to a laryngologist and otologist, and the specialist was unable to find any focus of infection to which the general condition of the patient could be ascribed. But the internist referred the patient back to the specialist and insisted that there was focus of infection somewhere. The patient was referred back two or three different times, and finally the specialist discovered the source of infection up in the antrum of Highmore; but the peculiar feature of the case was, that no pus was found, but a further and more thorough investigation showed there was dry exudate in the antrum of Highmore, and the eradication of this area resulted in a complete cure.

Personally, I want to thank Dr. Parsons for emphasizing the importance of these conditions.

Dr. E. D. Putnam (Sioux Falls): I did not hear the discussion; so for fear of repeating what has been said I will mention a branch of work which is closely allied to this. Dr. Dean, to whom reference has been made, has a great amount of cleft-palate work. Some of the gentlemen present, I have no doubt, do cleft-palate operations. Dr. Dean does not think of doing a cleft-palate operation until he has drained the sinuses of young patients. I saw him do considerable work. He has a specially devised instrument, very small in size, for draining the sinuses, and he puts these patients under treatment for a while before he begins the cleft-palate operation.

Dr. Alway: Does he do that in his office?

Dr. Putnam: No. At the hospital.

Dr. Charles A. Hall (Huron): This very valuable paper by Dr. Parsons is appreciated by the medical profession, and the good results of such a paper will be followed out from month to month and from year to year through us. But I have often wished that more attention could be paid also to ear infection, such as, twenty years ago, was brought out by the throat men in originating the term "mouth-breather." The condition was so emphasized by the throat specialist that the newspapers copied the term, and the attention of the average mother was called to her own children who had been mouth-breathers for months, and immediately these women began taking their children to the specialists and having the tonsils and adenoids attended to. I wish now that something like that might be originated by the ear men. Let them have some slogan that will reach the children throughout the country with discharging ears. How would "Ear Sewer" do?

How often is the general practitioner called to a child, or a child brought to his office, and the parent will say, "Oh, yes, this little girl has had a discharge from her ears for a month or two, or maybe, during her whole life." It is not brought to the attention of any physician until that trouble has become a menace not only to the hearing but to the health of the child.

These cases are scattered in great numbers all over the State of South Dakota. Every little while a farmer's child comes in with a neglected discharging ear simply because the mother has never had it called to her attention, and she has allowed this discharging ear to go for weeks and even months. I think if something could be done not only to reach the medical profession, but to extend the information to every mother throughout the land, who ought to realize not only that mouth-breathing is something that demands the closest and most careful attention, but that the discharging of the ear should be equally attended to promptly, and great good will be accomplished.

Dr. Parsons (closing): I was rather in hopes that we would get more discussion from the internists along the line suggested by this paper. I wish to thank Dr. Gross particularly for what he had to say.

The appeal that I tried to make has been in terms of life and death. I realize that we otolaryngologists have been looked upon as a lot of enthusiasts, and that our job has been to straighten crooked septa and fish things out of the nose and dig around in there and do a sort of surgical jewelry business. I am afraid that has been the attitude of medical men altogether too much towards the otolaryngologist. I am glad there is a growing appreciation of the fact that the field of the otolaryngologist involves the life and death issues of mankind, and I trust you will agree with me that I stated it very conservatively from the statistics offered, that fully one-half of our death-rate is in some way connected with the field of otolaryngology, and therefore you cannot give the problem of reducing the death-rate fair consideration without you consider how much the otolaryngologist is involved in this work. That is the big thing I wish to try to put across in this discussion.

In regard to the remarks of the gentlemen who have taken part in the discussion, I will say that the work of Warren Davis, of Philadelphia, has been very interesting. Davis has done a lot of important research work in regard to the development of the accessory sinuses in children. Contrary to the generally accepted idea, that children have no sinuses, and that the sinuses develop as the children grow older, Davis found, after sectioning about 150 heads, that a great many of these accessory sinuses were starting to develop before birth. In children of very few months old he found quite well developed frontal sinuses and antra, but the point particularly is that there are enough ethmoid cells developed to constitute a first-class trap for infection, and this point I have tried to emphasize. Picture the child with this first-class trap for bacteria to come into through the nose. Civilized man is spitting out infections from the upper air-passages, and the child grows up in an atmosphere of infection, and it is the almost universal lot of man to get an infected nasal mucosa, and with it throat-infection.

You know the old feeling we had about "catarrh." Everybody has got catarrh so what is the use of trying to guard against it. It is a misnomer. "Catarrh" is a chronic infection that is the starting point of these different forms of focal and secondary infections which take such a terrible toll of mortality.

One particular type of ethmoiditis, I mentioned, the hyperplastic type, is the kind that is so frequently overlooked. Most anybody can look into the nose and see pus running down. If you see polyps and granulation tissue you know there is something wrong, but it takes skill and patience and repeated examinations, with all

the armamentarium that we have at our disposal, to find out the facts with regard to the conditions of the nose. This condition of hyperplastic ethmoiditis is a low-grade infection, which will produce hyperplasia, from which there may be no external drainage of pus. This hyperplastic condition may retain, in some of the small chambers of the ethmoid cells, foci of infection, and all you can see is a catarrhal looking mucous membrane. We may find only a little hypertrophy, but there may be focal infection which we overlook. I wish to appeal to the internist to bear such things as that in mind, and to emphasize the necessity of making these examinations, and if he cannot make the examination himself, he needs the services of an otolaryngologist to help him out.

There is one other point I wish the internist would consider seriously. I think it is generally conceded that simon-pure tuberculosis infection itself does not do much harm, and while nature can take care of the tuberculous germ alone and beat him out in most cases, when the individual gets a mixed infection on top of a tubercular focus, then trouble begins, and that is where the big fight comes in. I believe it is not asking too much of the internist to insist that the first thing he does for a tubercular patient is that he get out of the way secondary infections with which the tubercular patient must fight, so that he can concentrate his efforts upon fighting the tuberculosis. I believe that is a very important point.

PROSTATECTOMY: A STUDY OF THIRTY-FOUR CASES FROM THE STANDPOINT OF MORTALITY AND MORBIDITY*

By V. J. LaRose, M. D.
BISMARCK, NORTH DAKOTA

This study, made in order to determine three important questions that come to the mind of the patient or members of his family when operative treatment becomes necessary in prostatic obstruction, is based on 34 operations performed by my associates or myself.

First. Is operation so imperative in prostatic obstruction that it is a matter of life or death?

Second. What are the chances of the patient surviving the operation?

Third. Will the patient be cured completely, or will he be forced to lead an uncomfortable existence afterward?

It has been stated that 33⅓ per cent of men past fifty years of age have hypertrophied prostates, and of this number 10 per cent require operation.

The onset of this condition is insidious, and first manifests itself by a lack of force and slowing up of the urinary stream. This condition may exist for some time before the patient becomes aware of it, and usually attracts little attention until the obstruction becomes acute; or a cystitis may develop, due to more or less accumulation of residual urine. This urine, becoming infected, causes varying degrees of cystitis with frequency of urination. We may call this the "kidney pill stage," when the patient invests in all sorts of "kidney cures," only to find his urgency and frequency increased by diuretic action of many of these patent medicines. At the same time he is developing a back-pressure, as the residual increases, which slowly but surely impairs the function of the kidneys until they are able to eliminate waste products just fast enough to maintain a precarious balance, requiring only a little push to topple it over. This push comes sooner or later in the form of acute retention caused by some irritation resulting in acute congestion of the hypertrophied gland, which shuts off the already narrowed lumen of the prostatic urethra. It is in this condition that the patient consults or hurriedly calls in a physician for relief. Many of these first retention attacks are relieved temporarily by use of the catheter, and the patient may go for weeks or months before a second attack comes on, which, however, is sure to come, sooner or later. Others get worse after the second or third catheterization, and the obstruction, due to increased swelling produced by trauma, becomes impassable. The physician who attempts after failure to pass a soft rubber catheter, to force stiff or metal catheters through, may injure the urethra and prostate to such extent as to produce dangerous complications. It is a great temptation, after having passed a catheter on a patient several times with comparative ease, to use more force and stiffer catheters, rather than to acknowledge defeat when you find that the obstruction has become impassable, thus causing varying degrees of hemorrhage and traumatism, which soon become a source of infection.

I would recommend, where you find an acute retention and are successful in passing a soft-rubber catheter, that you leave this catheter in

*Read at the Thirty-second Annual Meeting of the North Dakota State Medical Association, at Grand Forks, June 24 and 25, 1919.

position by fastening it with a few strips of adhesive plaster. This may save you in many cases a hurried trip to relieve the urinary accumulation since your last visit and also the possible failure of entering the bladder. In an excessive retention of many hours' standing, it is very easy, after passing your soft-rubber catheter, to control the rate of reduction by kinking over the catheter end and fastening it with a rubber band, so that a few ounces of urine can be released every hour, thus gradually reducing the retention and evading the danger of shock and uremia.

If you find a retention that needs immediate relief, and there is an impassable obstruction in the urethra, do not try to force a way through; much better aspirate the distended bladder just above the pubes with an ordinary needle and aspirator, or even a large syringe connected to the needle by a rubber tube. If these are not available, a trochar may be plunged into the distended bladder suprapubically, and a soft-rubber catheter introduced through the canula, which is then removed. The catheter can be fastened with a stitch or adhesive plaster. You may then take your time for moving the patient to town or to the hospital. There is absolutely no danger in making a suprapubic puncture into the distended bladder, if done aseptically. It takes only a few seconds, gives immediate relief, and is much more preferable than tediously trying to force one's way by an obstruction, with all the dangers of false passage, traumatism, and hemorrhage. I am sure suprapubic puncture is far too little used in this class of cases.

Many of the patients operated on in our series came to the hospital with enormously distended bladders and severely traumatized, impassable urethral obstructions, so that it was necessary to do a suprapubic cystotomy at once. Some of the patients were on the verge of uremia, as shown by dry tongue and drowsy condition, so that the question arose, by emptying the bladder, would the relief of pressure against the damaged kidneys cause a congestion that would result in anuria and uremia? This problem was solved by adopting the same principle as when the retention urethral catheter is used—gradual reduction of the distention. Under local anesthesia an opening is made suprapubically, and the distended bladder exposed. The excess of urine is drawn off with an aspirating-needle so as to prevent urine gushing out and soiling the operative field. The bladder is then held up with a suture on each side and incised. A large-sized mushroom catheter is rapidly and snugly fastened in with a purse-string suture. The free end of the catheter is connected up with an irrigating-bottle, and the amount of urine withdrawn is replaced with saturated solution of boric acid. The catheter is then clamped with a hemostat, the wound sutured, and the patient put to bed. The nurse is instructed to withdraw two to three ounces of urine every hour until the withdrawals are far enough ahead of the accumulation finally to empty the bladder, which period should extend over three days. The clamp is then left off, and the catheter allowed to drain into a bottle suspended from the patient's binder. He can now be up and around.

From the preceding it will be seen that, should the patient pass through his first or second attack of acute obstruction by receiving temporary relief, he is still the victim of a constantly increasing back-pressure with chronic infection, and is a graver surgical risk when his next obstruction occurs. On the other hand, a small percentage of these patients with obstruction learn to catheterize themselves. They frequently carry a dirty catheter around in their vest pockets, often using saliva as a lubricant, and only pass the catheter when the urinary accumulation becomes uncomfortable; consequently, they suffer, not only from a constant back-pressure, but also from a chronic infection of the entire urinary tract. The mortality of catheter life is 100 per cent, and very few live longer than there years. Therefore, I would answer the first question thus: Operation to relieve prostatic obstruction is imperative.

When the patient has passed the danger point after being relieved of his acute obstruction, an intensive study of his physical condition should be made. Some men at fifty or sixty are poorer operative risks than others at sixty or seventy. Each case must be studied individually as regards circulatory and pulmonary condition; the ratio between systolic and diastolic blood-pressure; examination of the blood with frequent hemoglobin estimate; the functional activity of the kidneys as shown by the phthalein test; daily observations of the twenty-four hour output of urine and its contents of solids as shown by the specific gravity.

While carrying on these examinations, I prefer to have the patient up and around for the greater part of the day if possible, as he eats better, sleeps better, and gains strength more rapidly.

Following the general physical examination, which should include a careful rectal examination of the prostate to determine the type of hypertrophy—whether it is the soft, adenomatous enlargement, the small, hard, fibrous type, or the nodular hard firmly fixed type of infiltrating carcinoma—an *x*-ray examination of the entire urinary tract is made to determine the possibility of the presence of complicating calculi, which may exist in the prostate, bladder, ureters, or kidneys.

In cases where the instrument can be introduced without producing trauma and hemorrhage, cystoscopic examination should be made to determine the presence of pathological conditions, such as median bar obstruction, diverticulæ, papillomata, or malignancy. This examination is usually confined to patients who have been able to tolerate a retention catheter with comfort.

In the majority of suprapubic drainage cases I have been able gently to palpate the interior of the bladder, in order to determine the presence of intravesical lobe and the condition of the bladder neck before fastening in the mushroom catheter.

The pre-operative treatment, in addition to general hygienic measures to build up the patient, should be directed toward definite lesions that may be present, particularly to the infection that is always present in preliminary drainage cases. Hexamethylenamin with acid sodium phosphate should be given throughout. Keeping the urine acid also prevents the calcareous incrustations that form with infected alkaline urine where drainage is necessary over long periods. The bladder is irrigated daily with a saturated solution of boric acid or a solution of potassium permanganate.

To the last eight patients operated on, several doses of mixed colon streptococcic and staphylococcic vaccines were administered both before and after operation, but the number of cases is too small from which to draw conclusions.

All urine passed is saved. The amount passed in twenty-four hours and specific gravity are recorded. When the output totals 1,500 c.c. to 2,000 c.c. with a specific gravity constantly above 1010, a phthalein functional test is made. The elimination in two hours should be well over 40 per cent.

Blood examination in favorable cases should show the hemoglobin not lower than 50 to 60 per cent.

A patient in good physical condition with hemoglobin percentage of 60 or above, a phthalein output of 50 to 60 per cent in two hours, excreting 1,500 c.c. to 2,000 c.c. of urine with a specific gravity above 1012, is an ideal risk for operation. Just how far a patient can be below this standard and still come through depends upon the judgment and surgical skill of the surgeon. There are some patients who never can be brought up to a stage of operative safety after preliminary drainage, and they should never be subjected to prostatectomy. Others will respond slowly, and may require months of preparatory treatment and observation before operation should be attempted.

It is now generally conceded that the suprapubic route is the one of choice. Many surgeons favor the one-stage operation, while as many more favor the two-stage operation. Several of our patients have been operated on by the one-stage method. They were of the young vigorous type who tolerated the indwelling urethral catheter without discomfort and had only a minimum infection. The older, more feeble men, who showed evidence of graver infection and lowered kidney-function, had, first, a suprapubic cystotomy under local anesthesia with a mushroom catheter stitched into the bladder and an additional drain placed in the prevesical space. The second drain was removed after a few days. This encourages adhesions, which protect the prevesical and perivesical tissues, minimizing the danger of infection when the second operation to remove the prostate is performed.

The operation, whether one- or two-stage, is performed under combined local and general anesthesia. The suprapubic area is infiltrated down to the bladder with 0.5 per cent novocain. Ether is then given by the open method while the bladder is being exposed and infiltrated. Excessive fluid in the bladder is removed by aspiration. Incision is then made into the bladder. By this time the patient is well under primary anesthesia. The prostate is rapidly enucleated, ether discontinued, the bladder held open by retractors and inspection of the prostatic pouch made to observe hemorrhage or tags of prostatic tissue that may complicate healing. If the hemorrhage is excessive, it is controlled by suture or packing. A large tube is introduced, and the bladder snugly stitched up to it with chromic gut. If packing is necessary the free end of the long strip is brought out through the tube, so that it may be gradually removed later.

Every operative case should be in charge of a

competent special nurse for at least the first week following the operation, or until the immediate danger of post-operative mortality has passed. The causes of death following operation are hemorrhage, shock, embolism, pneumonia, and infection. The post-operative mortality varies from 3 to 12 per cent with an average of about 6 per cent in the hands of different surgeons. A good observant nurse, constantly on the job, will serve to reduce this mortality.

The patient when returned to his room should be partially elevated on a back rest, and given sodium bicarbonate solution by proctoclysis. Pain and tenesmus should be relieved, and I have no hesitancy in giving enough morphine to keep the patient comfortable for the first twenty-four hours. I have had several cases where pain was severe, and the patient apparently in shock, change to a most favorable condition after a hypodermic of morphine. Hypodermoclysis of normal saline solution and camphor hypodermically act well if stimulation is needed.

The drainage should be carefully watched, and if bloody, with no signs of acute hemorrhage, a dose or two of coagulose will often control oozing. If drainage suddenly stops and the patient complains of tenesmus, it is usually due to stoping of tube with blood-clots. A syringful or two of saturated solution of boric acid injected into the drainage-tube will often relieve obstruction and make the patient comfortable. The later treatment consists of keeping up elimination by bowel, and keeping the urine antiseptic and acid to minimize infection.

Vaccines are continued as before the operation. The patient is encouraged to get out of bed as soon as his strength and the wound healing will permit, usually the fifth or sixth day. The large tube is replaced about this time by a smaller mushroom catheter. There will be some leakage, but the patient should be kept clean and comfortable by frequent changing of dressings. In some cases it may be necessary to remove the suprapubic drainage entirely owing to irritation caused by contact of the tube with the base of the bladder. In these cases the skin about the wound requires careful attention, and should be protected by a heavy ointment such as 30 per cent bismuth subnitrate. Melted paraffin, applied in the same manner as a dressing for burns, gives adequate protection in cases where the skin can be thoroughly dried. In four cases recently treated where leakage of ammoniacal, foul-smelling urine caused great discomfort, I had the patients put into a warm sitz bath, and taught to use irrigation by the Valentine method while sitting in the bath. This did away with the odor, and gave them such a feeling of comfort and cleanliness that they used it frequently. The question of infection through the open wound may be brought up, but with the granulations formed at this time and the stream of antiseptic fluid flowing from the wound, I do not fear infection; in fact, the cases mentioned healed rapidly after this form of treatment.

As soon as urine passes per urethram, all suprapubic drainage is removed, and the suprapubic wound strapped with adhesive plaster to encourage normal urination. If there was no tendency to urinate per urethram after three weeks, I introduced a cystoscope through the suprapubic opening, and at the same time had a catheter or sound passed through the urethra. In this way I have been able to determine the cause of obstruction in several cases.

In this series there were 34 cases operated on for the removal of the prostate gland. Analysis of symptoms revealed the following:

Age.—The oldest patient was 92 years old, but an explanation is due as to why one of this age should be subjected to operation. This case will be reported separately and not included in estimating the averages. The next oldest patient was 78 years, and the youngest was 53 years; the average age was between 65 and 66 years.

Urination.—Difficulty in starting and slowing up of the urinary stream was a constant symptom in every case. Two patients had noted it for twenty years, 1 for sixteen years, 1 for thirteen years, and others from one to twelve years with an average of four years.

Retention.—Twenty-one patients had acute retention when admitted to the hospital. The remaining patients all had varied amounts of residual urine with more or less frequency. Self-catheterization had been practiced by 5 patients for periods varying from three months to three years.

Preliminary drainage of the bladder.—Fourteen patients in good physical condition who could tolerate the indwelling catheter were prepared for operation by this method. In 5 of the above cases the retention-catheter had to be removed on account of severe pain and tenesmus, which was relieved as soon as suprapubic drainage was established. In 15 patients who had been more or less traumatized where an attempt to pass a catheter caused severe hemorrhage, the bladder

was drained by suprapubic cystotomy. The longest period of pre-operative drainage was seventy-eight days and the shortest five days, with an average of twenty-four days.

Type of operation.—The perineal route was used in 4 of the earliest cases, and the remaining 30 patients were operated by the one- or two-stage suprapubic route.

Post-operative drainage.—The longest period was ten weeks, the shortest two and one-half weeks, with an average of four weeks.

Hemorrhage.—There were no cases of primary hemorrhage but were controlled by suture or packing the prostatic pouch with a long gauze strip which was removed gradually through the suprapubic tube at the end of forty-eight hours.

Calculi.—In one case the gland contained a nest of small faceted calculi.

Malignancy.—The glands removed in the first fourteen operations were not examined histologically. Examination of the last twenty removed showed adenomatous or fibro-adenomatous hypertrophy. Two of these contained nests of cancer cells.

Complications.—One case developed secondary hemorrhage three and one-half weeks after operation, making it necessary to reopen the suprapubic wound. On retracting the bladder, a bleeding vessel could be seen at the edge of the prostatic pouch. This was controlled by suture.

Obstruction.—Two patients passed no urine per urethram, and the suprapubic wound failed to close. In the first, a cystoscope introduced into the bladder through the suprapubic sinus with a sound in the urethra, showed a tag of bladder mucosa grown across the prostatic opening. This was removed, and the obstruction permanently relieved. The same procedure, followed in the second case, demonstrated a narrowing of the bladder neck. Sounds up to 32 F. were passed and the obstruction relieved.

Mortality.—There were three deaths following operation. All occurred among the earlier cases. One patient, aged 68, operated on seven years ago, died suddenly four hours after the operation from cerebral embolus.

The second death, three days after operation performed five years ago, was of a patient 72 years, who gave a history of bladder trouble for twelve years with several attacks of acute retention. For months he had been losing weight, and complained of poor appetite, nausea, and marked frequency. He had thirty ounces of residual urine. He was first treated with a retention-catheter and gradual drawing off of the residual urine. One week later suprapubic drainage was established on account of intolerance for the indwelling catheter. The daily output of urine averaged from 1,500 c.c. to 1,800 c.c., with specific gravity from 1005 to 1009. A functional test made the fourth week of pre-operative drainage gave a phthalein output of 20 per cent for the first hour and 15 per cent for the second. Placing too much reliance on the functional test, prostatectomy was performed. Three days later the patient died of uremia.

The third patient, a man aged 70, died of infection twenty-seven days after operation. He did well up to the thirteenth day, when he developed a painful epididymitis with edema of the scrotum, had chills with a temperature of 104°. There was some improvement for ten days, when bronchopneumonia developed, ending in death four days later. The patient, aged 92, was a vigorous, well-preserved old gentleman with a history of prostatic trouble for twenty years and numerous attacks of acute retention, which were relieved by self-catheterization. He came to the hospital complaining of acute obstruction with severe pain and tenesmus. A soft-rubber catheter passed and left in for drainage served only to increase his pain, so that he begged for relief. A suprapubic drain was substituted. This gave him the desired relief, and he left the hospital at the end of a week, but soon returned demanding that something further be done, as there was more or less leakage, and he preferred death to the discomfort. Under protest the suprapubic opening was enlarged, using local anesthesia. The cause of obstruction was found to be due to a small intravesical median lobe, which was removed. He made an uninterrupted recovery, and left the hospital able to pass urine in the natural way. Three months later he was found dead in bed, although he had made no complaint of feeling ill the day before.

To determine the mortality and morbidity after varying periods of time after operation, thirty-one questionnaires were sent to former patients, and replies were received from twenty-nine. There were five deaths reported. With the exception of one death from carcinoma of the bladder none could be directly traced to the former prostatic trouble. There was one death from influenza and pneumonia six years after operation; one from "stomach trouble" two and one-half years after operation; one from "heart trouble" three years after operation; one from actinomy-

cosis of the lungs six months after the operation; and one from cancer of the bladder and rectum three and one-half years after operation. In the last-named case cancer cells had been demonstrated histologically in the removed gland.

Of the remaining 25 cases all are living and enjoying good health as specified in the following table:

12 years after operation	1
9 years after operation	1
8 years after operation	3
7 years after operation	4
6 years after operation	1
5 years after operation	1
4 years after operation	2
3 years after operation	5
2 years after operation	2
1 year after operation	5

All replied "Yes" to the following questions:

Can you pass urine freely?

Can you hold your urine easily?

Did your operation cure you?

To the question, "Have you ever had stoppage of urine since operation?" all answered "No."

From the above replies I am convinced that a plea to advise early operation in prostatic obstruction should be made to general practitioners, as they see and treat more cases in their earlier stages than do the specialists.

Early removal of the prostate before danger to the kidney from back-pressure has become serious, before residual urine has caused infection of the urinary tract, and before cancer cells have invaded the capsule of the gland, will save many more lives and give these patients a comfortable old age.

With a further development of surgical technic, I am convinced that early operations requiring shorter pre-operative and post-operative treatment will be done as aseptically and as safely as an interval operation for appendicitis.

DISCUSSION

Dr. J. E. Engstad (Grand Forks): The speaker has so completely covered the subject that it is futile for me to discuss this very able paper, which is the last word in this important field of surgery. I will, therefore, confine myself to a very brief historical review of prostatic surgery.

Surgery of the prostate is at the present time just emerging from surgical interference of necessity to one of convenience for the safeguarding of health, as well as life, and I venture to say that inside of another decade it will be resorted to almost as readily as we now amputate a gall-bladder or an appendix.

In my first years in Grand Forks I had a number of cases of prostatic obstruction, and a few operations were performed all by the perineal route, and without the assistance of Young's retractors. This was a most formidable operation, and our death-rate was correspondingly high. Then for a decade we had very few cases of prostatic obstruction, for the reason that the overwhelming number of the male population was of middle age, the older men coming out here being either decrepit old men or derelicts that seldom came into a doctor's office.

When prostatic cases again presented themselves, surgical technic had been perfected, and with the introduction of proper retractors the perineal operation was not nearly so formidable as had previously been the case. About that time the discussion of the choice of operation waxed warm, and continued for a number of years; and we may say it is still a debatable question although the preponderance of opinion favors the suprapubic route.

The essayist did not lay any special emphasis on the median bar obstruction, which, in my opinion, is a not very rare cause of obstruction. I have operated in at least two cases where the obstruction was due to hypertrophy of the posterior lip of the vesical orifice, one a distinct hypertrophy and another grandular. These trabeculations give all symptoms of prostatic obstruction, except the classical enlargement of the prostate.

We can safely leave the field of possibilities for one of certainties, if we consider that in a large number of males over the age of fifty there is a tendency to suffer from retention, and most often unknowingly. This retention may cause a dilatation of the ureters and the pelvic receptacle of the kidneys, yet the individual may live to good old age and die from some other form of lethal disease. We must, however, have in mind the possibility of the ever-present tendency to infection of the urinary tract in these individuals, and, let me add, infection by a virulent streptococcus, which may not cause apparent urinary irritation, nor put forth such danger signals as albuminuria or discharge of pus.

A number of years ago Dr. Frank Lydston explained to me the most common failure of catherization of a distended bladder, and the point he especially emphasized was, that in distention the opening of the viscus is pressed against the pubic bone, forming a right-angle kink in the urethra. By sharply elevating the end of the silver catheter, almost any bladder can be entered where there is no gross pathological obstruction.

It is commonly understood that the parid emptying of the viscus after a long distension is both dangerous and unwise on account of a tendency to hemorrhage. That this is true I had good evidence of in a case I distinctly recall, and, in common with Senator Clark of Missouri, I like to be shown. I had the chance in a most marked case of distension, which was referred to me by a physician of Polk County. Cystotomy had been performed at the patient's home, a small canula being used, and nearly a gallon of urine was drained off in an hour's time.

As the patient had to be taken on the train to Grand Forks, the drainage-needle was removed, and on his entrance to the hospital, a few hours later, the viscus had refilled, while the edema was not markedly reduced.

As the patient was fast entering a comatose stage, an operation was decided upon, and the bladder was rapidly entered. There was the expected great gush of urine, and after a short interval a seeping hemorrhage occurred seemingly from every capillary inside the organ. The walls became a vivid red, which color, however, disappeared under a hot irrigation of saline solution.

On inspection of the urethral openings after the hemorrhage had ceased, there came from both a steady stream of urine, not the intermittent rushes we see in the image through the cystoscope.

No hemorrhage took place in the kidneys, for the urine was clear. The offending single middle lobe was shelled out, and my patient made a complete recovery.

A Boeckmann operation was also resorted to.

Let me congratulate my confrere on his low-mortality record, a record far below mine with about the same number of cases.

Dr. LaRose (closing): I wish to thank Dr. Engstad for his review of my paper. He mentioned the median bar. I did not touch upon it, for it is an entirely different condition from prostatic obstruction and is a condition which we must use every effort to diagnose before attempting removal of the prostate. If you arrange to remove the prostate and, on opening into the bladder, find that you have a median-bar obstruction, your procedure is so different that it is well to know beforehand that that condition exists. I mentioned in the paper that one should always make an effort to diagnose all obstructive conditions that differ from prostatic enlargement. I find on rectal examination that cases that show very little, if any, enlargement of the prostate, but where there is a hard, tense feeling, as though the prostate is anchored firmly in between the pelvic bones, are usually contracted bladder neck, median-bar obstruction, or malignant. The diagnosis should be made with the cystoscope before operation.

In answer to Dr. Bratrud's question: Cases of bladders that have been infected are really better surgical risks than the cases that have not been infected. The patient establishes immunity. In other words, he vaccinates himself, and will stand post-operative shock much better than a clean case would. I would rather deliberately infect a bladder by suprapubic drainage, for I believe that after a patient passes through such an infection he is a safer risk.

As to the vaccines: I have been using them as a routine in all recent cases, but, as I mentioned in the paper, I have not had a sufficient number of cases to be able to draw conclusions that would be of value at the present time.

WHY VENEREAL DISEASES CONTINUE TO EXIST*

By Franklin R. Wright, M.D., F.A.C.S.
MINNEAPOLIS

Venereal diseases have existed since the earliest times. Moses in the Book of Leviticus gives a description of gonorrhea. Hippocrates and Celsus described both gonorrhea and venereal ulcer. Syphilis was epidemic in Europe in the latter part of the fifteenth century. Gonorrhea was so prevalent among the Jewish tribes that Moses issued certain rules for the guidance of the people to prevent its spread. Nobody knows where these diseases came from, but everybody knows they are present. The people may not have definite ideas as to what venereal diseases are, but they all know that they exist, and know something of their danger if infected.

Why is it that, having this knowledge, people will continue to take chances? What is the force that causes the young man, who has just recovered from a severe attack of gonorrhea, to promptly expose himself to fresh infection? The person who would answer these questions must first acquire some appreciation of sex, and its influence on the individual, male or female.

The book of Nature contains all information; if we want to study sex, we must turn to that. In the spring we go out to the farm; in the corner of the barn we find a stallion; he is carefully guarded; whenever he is taken out of the stall, two men are present, because it is unsafe for one to undertake to handle him. We look out in the yard and see a fifteen-year-old boy leading a sister of this animal by a light rope in perfect safety. The difference is sex, and nothing else.

In all animal life, from the lowest to the highest, the male has strong sexual desires, while the female has strong maternal desires. The male is always the aggressor in matters of sex. The female may make the way easy, but she is never the aggressor. The human female, together with the one or two of the higher orders of monkeys, are the only ones known to have sexual intercourse for the pleasure of the act.

Men and women are both human; they differ only in sex, yet they are as different as day and night. They do not understand each other; it is impossible for them to do so. Woman has never felt the sexual impulse which man knows. She judges, or rather misjudges, him by her own feelings. She cannot understand why man gives way to feelings which she herself controls so easily. On the other hand man has no appreciа-

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tion of the loneliness of a childless woman, nor can he understand the maternal longing that will cause a woman, when she becomes pregnant, to stay in bed nine months, that she may become a mother.

Man possesses the strong sexual desires that Nature has given the male throughout the entire animal creation. A writer on the psychology of sex has said that the man of thirty-five who brags that his will-power is so strong that he has never had intercourse with any woman, is not bragging of the strength of his will-power, but, rather, is boasting of the weakness of his sexual powers.

Man is naturally a Mormon. In an experience of over twenty years in the treatment of venereal diseases, I do not recall one patient who ever questioned his act from a moral standpoint. He will curse his luck, or be worried for fear his family will find out, but never have I heard a man question the morality of his act. It never worries him to break the moral law.

The sexual desires of normal women are very moderate, compared with those of men. To woman is given too much credit for being virtuous. Why should she not be virtuous? She has only weak sexual desires, and is not a Mormon by instinct. Every normal woman wants her own babies, but she also wants one and the same man to be the father of them.

Education is gradually modifying sexual life in women. Every young girl is taught that to acknowledge even to herself that she has sexual desires or feelings, is indecent, if not vulgar. As a result of this education, sexual desires are being gradually blotted out of the human female. At the present time it is estimated that 5 per cent of women have no sexual desires, and that 40 to 45 per cent have no such desires until after marriage, when they learn to take interest in sexual matters. About 50 per cent have normal sexual desires before marriage. This leaves a small percentage (5 to 10 per cent) unclassified. This small group have abnormally strong sexual passion. The prostitutes are recruited from this small group. It has been said that prostitutes, like poets, are born, not made.

In this country there is a group of women, both male and female, who believe that every woman who is leading a life of prostitution, is doing so because of the villainy of some man. In my opinion this is not true. It is as impossible to make a prostitute out of a normal girl as it is to reform a prostitute and make a normal girl out of her. These women are prostitutes because they are abnormal; they are abnormal both sexually and morally.

This group of women are advocating a single standard of morality for men and women. They have not obtained, nor will they obtain, much of a following, because their idea is based on their own feelings instead of on a knowledge of sex. Society is not apt to change a standard that has grown out of a physiological fact. The physiological fact is this: There is never any question about the maternity of children, but who knows the paternity of a baby? No one but the mother has any exact information on this subject. Man accepts the baby as his because of his faith in his wife and in her virtue.

Man's faith in the virtue of women is a product of recent years. How many of you have seen in the museums of Europe the iron T bandage, that in olden times man was accustomed to put on his wife when he was to be absent from home any length of time? One of two things is deduced from this fact: either the women of those times were lacking in chastity, or the men had not learned that they were to be trusted.

These same people claim that celibacy is not harmful to health. I would direct their attention to the thin, half-invalid maiden lady, of unnumbered years, who marries, and after a few months has gained several pounds in weight, and her friends say she has renewed her youth. I would ask, if this lady was in perfect health before her marriage, what is the matter with her now? If they believed she was in perfect health before her marriage, why has she increased in weight and regained her youthful appearance so soon after beginning a normal, physiological, sexual life?

Those female members of respectable society who are having illicit intercourse, belong to the group of women who have relatively strong sexual desires; they are married women who find themselves and their husbands sexually mismated, or widows and young women who have never been married. A peculiar trait of feminine character gives women an abiding faith in their men friends. They know that venereal diseases exist and how they are communicated from one to the other. Each one is absolutely sure that her friend will not give her anything of the kind—he is too much of a gentleman to do such a thing.

Why is it that women so often find out too

late that their confidence has been misplaced? Are men so lacking in character that they willingly infect their women friends, or are they honest in the belief that they have entirely recovered from the disease from which they have been suffering?

It is estimated that from 90 to 95* per cent of men have venereal disease some time during their lives. We do not know what proportion of them completely recover. A young man discovers that he has a urethral discharge. He confides in a friend, and is given a prescription that has never failed to cure. If the discharge does not disappear promptly, he goes to a druggist, who gives him a mixture guaranteed to cure in five days. If this stops the discharge, he knows that he is well; if it does not, he finally goes to his family physician, who, after no other examination than a few questions, treats him until it does stop, and then tells him he is cured, and allows him to return to his ordinary habits in life. If he has developed a venereal sore he is given a dusting powder; when this sore heals he is well. It must have been a simple sore, it healed so readily; and he is again allowed to return to his ordinary habits in life. This outline of treatment is more or less accurately the treatment which a fairly large percentage of venereal cases receive. They return to their ordinary customs in life with uncured troubles, later to be chosen by some eminently respectable female member of society as her confidential friend. Is it any wonder that these women find their confidence misplaced?

There are two diseases that the general practitioner of medicine knows all about, of which he is willing to express an opinion, or for which to treat any patient who comes along; they are gonorrhea and syphilis. There are also two diseases that the general practitioner of medicine never studies; they are syphilis and gonorrhea.

With our entrance into the World War, the army made a special fight against venereal diseases, probably reducing such diseases in the American army to the lowest point of any army in the field. At the same time certain states began propaganda for the control of venereal diseases among the civilian population, which propaganda consists in requiring all persons, both male and female, known to be infected, to be treated, and in educating the female public in a knowledge of venereal diseases.

In the army results were obtained because the men were under absolute control, and because the cantonments have been largely in small communities, which necessarily contain very few prostitutes. In civilian life people are guided by their own sweet will. The governing influence in civilian life is a person's moral sense and his sense of fear. They have three things to fear: that the lady in question may become pregnant; that their acts may become known; or that one or the other may contract venereal disease.

It is the hope of those carrying on an educational propaganda among the civil population that with an increased knowledge of venereal diseases will come an increased fear of infection and a lessening of promiscuous intercourse. To my way of thinking, they defeat their own aims by the publicity which they so ardently seek. They teach the public the danger of infection with these diseases, and at the same time announce in big letters that the State is attempting to cure all persons known to be infected with any of them, thereby making fornication as safe as possible.

The spread of venereal diseases may be controlled in two ways: first, by lessening promiscuous intercourse; and, secondly, by education. Promiscuous intercourse can be lessened only by inducing young people to marry early. Fathers must encourage their sons to marry early, and, if necessary, must help them financially to start their own homes, instead of saving money to be given them as a legacy.

Education that will control venereal disease will not be accomplished by the help of newspaper reporters or the press reports so dear to the heart of the lecturer on social hygiene. These bring notoriety, not fame, and do not educate the public. The untrained layman is not competent to interpret medical questions. He almost invariably draws wrong conclusions; therefore it is not right nor reasonable to furnish him, under the guise of education, with a few facts from which he is to draw his own conclusion. Proof that medical facts are misinterpreted is shown in the present attitude of the public towards syphilis. Ten years ago, before salvarsan had been announced in the public press as a sure cure, when a physician made a diagnosis of syphilis people considered it something serious. Syphilis had the reputation of being an incurable disease, and the people knew it was no trifling matter to become infected. At the present time, since they have gained a smattering knowledge regarding salvarsan and its use, and of the Wassermann reaction, if the physician

* European figures.

makes a diagnosis of syphilis in a young man it does not worry him. He will simply say: "606 will cure that. How long is it going to take and how much is it going to cost?"

Education that is to affect materially medical or sanitary conditions in the country must begin in the medical profession. In combating venereal diseases each doctor must become a teacher, and teach the individual patient the facts that are known. Until the medical profession realize the prevalence and seriousness of venereal diseases to the point that they will study and gain sufficient clinical experience to properly diagnose, and to treat these diseases intelligently, and to explain their dangers to the patient, no progress will be made. In other words, the medical men must first appreciate the seriousness of the condition before they can expect the people to consider venereal diseases anything but trifling affections.

REPORT ON CASES OPERATED ON DURING CLINIC WEEK

By Drs. F. J. & J. A. Pratt
MINNEAPOLIS

Case 1.—Mr. G. Removal of dislocated lens from the right eye. The patient was injured fifty-five years ago, and has been practically blind ever since. He called at the office with an intensely painful and inflamed eye, with a small opaque line in the anterior chamber. In operating the upper cut was made and the lens removed; the pain ceased, and the patient left the hospital on the sixth day. Vision in the eye has greatly improved.

Case 2.—Mr. J. S. Smith-Indian cataract operation on the left eye. The operation was classic. There was no pain during or after the operation. The bandages were removed from both eyes on the fifth day, and the lids examined. There was no swelling, redness, or discharge. The eye operated on was sealed, and the patient was given the use of his good eye. He left the hospital on the twelfth day.

Case 3.—Thomas G. Smith-Indian cataract operation attempted on the right eye. The zonula would not break, and the capsule ruptured under the pressure, and the lens was removed. The capsule, which was in the wound, was removed, and the vitreous presented. There was no pain following the operation. The bandages were removed on the fifth day, and the lids examined. The right eye was re-sealed, and the patient was given the use of the good eye. He left the hospital on the twelfth day with a clear black pupil.

Case 4.—Mr. E. Traumatic pterygium removed. The patient was burned some weeks ago by a boiler solution. The burn on the upper lid caused ectropion, due to curled cartilage, which was relieved by the removal of the tarsal cartilage. The classic pterygium operation was performed. The eye is now normal.

The two patients on whom was performed exenteration of the ethmoids left the hospital at once, with an uneventful recovery.

In the tonsil case, we used the modified La Force-Sluder light clamps. These clamps are placed with the Sluder technic, and allowed to stay from five to ten minutes when the tonsil is removed by a spade knife. There is absolutely no bleeding in 75 per cent of patients operated on.

Case 5.—Mrs. H. Simple mastoidectomy following a running ear of several weeks. There were absolutely no mastoid symptoms except abundant discharge. The operation was performed by the electric burr, and the mastoid was found necrotic. The small rubber tube was placed for drainage, and the wound was closed by metal sutures. The patient left the hospital the next day. The dressing and sutures were removed on the third day, and the dressing changed every day thereafter. The wound completely closed on the thirteenth day, and the patient was discharged on the fifteenth day.

THE
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W. A. JONES, M. D., EDITOR

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THE WASHINGTON STATE MEDICAL ASSOCIATION MEETING

The State Medical Association of the great State of Washington held its thirtieth annual meeting at Spokane on September 11 and 12. As the meeting took place in the spacious rooms of the Davenport Hotel, which, by the way, is one of the finest in the country, there was no inconvenience either to the speakers or the visitors.

The program began promptly at nine o'clock Thursday morning with seventy-five men present, which was considered a very good attendance for the first session, and for two days the reading of scientific papers continued. The Chairman and President of the Association, Dr. Herman P. Marshall, of Spokane, was an admirable presiding officer.

As is very frequently the case with a state medical association meeting, the papers were largely surgical, although, for some unexplained reason, there were surgical and medical cases that were interesting to the neurologist. For instance, the first paper was that on "Building a Prognosis in Diseases of the Nervous System," by Dr. W. V. Gulick, of Seattle. The second paper was on "Ligation of the Superior Thyroid Pole Under Nerve-Block Anesthesia," by Dr. John W. Hunt, of Seattle. The third paper was on "Observations on Thyrotoxicosis," by Dr. J. M. Blackford, of Seattle. Following these were other papers: "The Surgical Treatment of Tri-Facial Neuralgia," by Dr. A. W. Adson, of Rochester, Minnesota; "The Principles of Healing," by Dr. J. D. Windell, of Spokane; "The Pathology of Skull Fracture," by Prof. E. R. LeCount, of Chicago, Illinois; "The Diagnosis and Treatment of Peripheral Nerve Injuries," by Dr. Lawrence Selling, of Portland, on the neurological phase, and by Dr. T. M. Joyce, of Portland, on the surgical phase; and a paper on "Cerebral Pressure Following Influenza," by the writer, the Editor of THE JOURNAL-LANCET.

All these papers seemed to fit in very closely, and were freely discussed. The only possible criticism that could be offered is, that the discussion was not taken down by an official stenographer. It has been found that discussions are equally valuable, sometimes, as papers, indeed often more so.

The papers by Dr. Hunt, Dr. Fassett, Dr. Adson, and Prof. LeCount, and that of Dr. Frank Hinman, of San Francisco, on "Consideration of the Diseases of the Prostate," were accompanied by lantern slides, which graphically brought out the points of the essayists.

The total attendance at the meeting was about 225. It was very representative, and showed the timber of the men who are advancing medicine and surgery in the State of Washington. Incidentally, it was noted that a very large number of men who graduated from the University Medical School of Minnesota were not only in attendance at the meeting, but formed a part of the State Association. In all probability, Spokane, Seattle, Tacoma, and Portland are represented by approximately fifty Minnesota graduates, and, so far as the writer could see and learn, they were all prosperous, and had attained a standing and reputation in the profession that are enviable.

The social side of the meeting was not neglected for a moment. On the evening of the first day a smoker with vaudeville was given at the Spokane Club, which seemed to have been turned over bodily to the members of the Association. Nothing was omitted that would make the members of the Association lack for enjoyment.

Unfortunately—for some at least—the state of Washington is practically dry, but this neither dampened nor darkened the spirits of the men who were there. In fact, it rather lightened one's cares and reminded one of the old-time meetings of the Minnesota State Medical Association. Washington has been a prohibition state for the past four years, lock, stock, and barrel.

Of course, no one knows how much "stock" there is on hand, or how much there is in the "barrel"; but it is probably true that the lock is a little rusty, although the amount of stock and the contents of the barrel showed that the "lock" had recently been oiled. From a financial point of view, the state of Washington remains dry, as, if any bootlegger succeeds in crossing the border or bringing his wares into the state, the consumer pays from fourteen to eighteen dollars a quart, but, of course, this is not done, and is simply a theory on paper. Even though liquid nourishment seems to be necessary at banquets, it was entirely absent at this banquet, and this demonstrates clearly that medical men are in favor of prohibition and believe that their patients in any state can get along without liquor.

The program of the banquet was most ingenuously constructed. It was a travesty for a prohibition state to present a melodrama of the barren Northwest entitled, "The Moon-Shiner's Daughter"; and the cast of characters included almost everyone, from the President of the Association down to a Siwash Indian. There were gibes and puns and parodies of every known description, and this booklet alone would have been well worth the trip to Spokane to attend the meeting.

The Washington State Association is to be congratulated upon its attendance, the high character of the papers presented at its annual meeting, as well as on the personal membership of the Association. There seems to be in the West, particularly in the far West, something that is distinctly western,—a true and cordial hospitality; and when doctors are not mildly quarreling with each other over patients and diagnoses, they drop everything that is personal at all, and are a set of loyal, friendly, and closely bound medical men.

THE DOCTOR'S VACATION

Every man who practices medicine and surgery should take some time off. Some men have reduced this vacation proposition to a mathematical science, and they deliberately run away for a few days' fishing or a few days' hunting, or they disappear into other cities and seek the various forms of amusement which the larger cities offer. Even though they are gone but a few days it takes them away from the daily grind of work and annoyance, tire and routine, and they come back refreshed. In some instances some of their most troublesome patients have disappeared, or gone to other doctors, for which the vacationists are truly grateful.

A former resident of Minneapolis always maintained that it was not only good for him to take a vacation, but good for his patients, because he found, by experimenting, that if he left his patients for a time some of them recovered, and most of the disgruntled and troublesome ones went to other doctors, so that he frequently had a clean slate or a number of new patients awaiting his return.

The question comes up as to where to go. Where is the best play-ground? What is the best thing to do? It is often very difficult to decide.

One man suggests that he has his greatest pleasure on the seventeenth floor of a New York hotel, where he can sleep as late as he pleases, see as many or as few clinics as he chooses, and where he can go out and entertain or amuse himself by the various attractions of New York, or any other large city. He comes home free of care, free of his worries, and perhaps a little overstocked with high-priced food, but otherwise happy in his return.

Another man insists upon taking an ocean trip, and nothing is more delightful than to be in mid-ocean and to feel that no telephone can possibly reach him from either side of the water. It certainly is a great relief; and there is no reason to worry about your former troubles at home, because you cannot alter conditions on either side of the ocean.

Another man goes to the woods and tramps around a hidden lake which is full of fish and is bounded by pine trees, and he lives in a cabin or tent. He sleeps out in the open air. His face it badly bitten by mosquitos or bugs, but he comes back happy that he has been out of doors. Nothing like it! But he rarely goes to the same place a second time.

Another man goes to Alaska, where he can disappear from practically all signs of civilization. What he notices and feels the most is the great "enormous silence" that surrounds him, and he is at once comforted and happy to think he is out of touch with everything. He cares nothing for politics, congressional disputes, domestic affairs, or personal ambitions. He is all alone, and he is surprised to find that during that time his mind is not working very much and that he is having a perfectly normal period of rest.

Then there is the man who goes to a medical convention in another state. Perhaps he takes

part in the discussions or reads a paper. He finds himself surrounded, unexpectedly, by friends who have known him for years, and who joyfully and cordially introduce him to their friends. Of course, it makes a man conceited, and it flatters him to think that other people notice him and make something of him, but that is all in proper line with his vacation idea. It happened that the writer had such an experience. He found that his hotel accommodations were as good as there were to be had, and that he had a number of friends who were anxious and willing to entertain him and do all sorts of things for him, and who did, in the meantime seeing the crowds in Spokane who were welcoming the President of the United States. The following day he again saw the welcome which the great city of Seattle gave the President, and particularly that of the Pacific Fleet as it came into the harbor. There were crowds of people on land, and crowds of people on boats that carried passengers around and about the fleet so they could get a very near view of the whole situation. Then, finding that hotel accommodations had been reduced to nil in Seattle, he went over to the adjoining and rival city of Tacoma, where he heard that great crowds had filled the stadium in welcome to the President, and that all of the hotels were full except one room, which he, fortunately, secured for the night. And then his fellow men in medicine, Drs. W. B. and Charles McCreery, whom he knew in former years and who were students in the University of Minnesota, came rushing to his rescue and insisted upon taking him up to the top of Mt. Tacoma—as far as it is possible for an automobile to go. Of course he very gently, modestly, and as firmly as possible, declined, feeling that he was putting them to too much trouble, but his objection was overruled and he started out at seven o'clock in the morning for the mountain. He was told that he would be breakfasted thirty-five miles out on the road; and he found a very clean and bounteous breakfast room where the food was put on the table in such masses as would at once controvert any idea that the country is suffering for lack of provisions. Much to his surprise, he found that the ride in the open air toward the mountains had increased his appetite to such an enormous degree that he became gluttonous; and yet, for some reason, the mountain air dissipated the excessive amount of food which was consumed. The journey from this breakfast room by automobile up the trail and into Ranier National Park is one of great splendor, giving one wonderful glimpses of the mountain through the forest, and showing what can be done in the way of good roads in the West, for, even though they were sometimes dusty, they were firm and recently smoothed. He saw, too, with great delight, that the roadway led up by a careful incline to the top of an adjoining mountain before it reached the foothills of the great mountain. There an inn, with sufficient capacity for a hundred guests, was open, and many automobiles by their presence showed that the mountain was a great source of pleasure to a large number. After climbing a few hundred feet where one could see one side of the mountain with glaciers, snowfields, and stone terraces, and could view the valley below where the Nisqually river runs, he found that he was amply repaid in every way for the trip. This trip can be made, up and down, in a day easily, and one can return to Tacoma for an eight o'clock dinner.

The last day, the Pacific Fleet came into Tacoma harbor winding in and out like a long procession, solemn, quiet, and tremendously powerful.

On returning to Seattle, a friendly neurologist, Dr. D. A. Nicholson, gave him a dinner at the Club, where he met more of his friends and made new friends. Then, with his face turned homeward, he stopped at Lake Chelan, a wonderful lake forty miles north of Wenatchee and surrounded by little towns and much scenery. It being the custom of the country to detain the traveler as long as possible at the foot of the lake, hotel accommodations were secured and a trip up the lake for fifty-nine miles was made at seven o'clock the following morning. This lake is one of the most beautiful lakes in the United States, indeed in the world. It winds in and out of two mountain chains, and sometimes is only a mile in width and at most but two miles. The water is wonderfully blue, and the surrounding hillsides and mountainsides are within absolute reach of the steamer. One finds a resting place at one of the ranch houses, and is most hospitably received and cared for. Fortunately, this ranch house had all of the modern conveniences and everything necessary for comfort. After his visit of inspection and pleasure is over, he comes back to work refreshed and vigorous.

Why waste all one's time in practicing medicine when a trip into Nature's wonders is something that will never be forgotten? Then, too, to know that the people of the West are, first of all, hospitable, and that there is something about

them that differs so much from the people of the East that the western-born man invariably reverts to the West for his recreation, is a joy.

THE PATIENT, THE FAMILY, AND THE FRIENDS

The above title alone conveys to the minds of most medical men what the editor is about to say, and he wonders if what follows is not the general experience of men who are called upon to treat patients of different types and classes.

When the patient and the doctor meet, the doctor perhaps succeeds in making a good impression on the patient, and probably on the family; and then his work is comparatively easy. They all co-operate—the doctor, patient, and relatives; the doctor is the commanding officer, the patient is the willing candidate for health, and the family is standing behind, both morally and financially. Under such perfectly cloudless skies everything goes along as it should. Unfortunately for the doctor, however, these conditions are rare, and as he looks back upon his experience he is obliged to search his memory closely to pick out such a glorious and satisfactory combination.

On the other hand, the patient is in need of treatment. The family is willing that the treatment should be undertaken, and all goes well until some member of the family becomes overinterested and either inquires too closely, or begins to complain about certain things which probably do not exist except in the mind of this member of the family. This leads to a little dissatisfaction on the part of the patient, and a good deal of annoyance on the part of the doctor; but still things go on, and recovery takes place. If the patient happens to be one who is affected by a progressive disease, then there is more difficulty, the family wish they had taken the patient to another doctor, and very often the doctor is heartily in sympathy with this sentiment. Some doctors, however, resent this, and are indignant to think that their opinion is not supported by the family. Occasionally a violent difference in attitude and opinion breaks out, and the result is a change of physicians, or something of that sort. This, of course, is to be expected. The human race is weak in judgment and poor in its attitude toward matters medical or surgical because it knows practically nothing about them, yet insists that it ought to have a very large hand in the management of medical and surgical affairs. As a result of all this confusion, there is a split between medicine and the various cults that attempt to follow in medical trails.

The poor patient is the one who really suffers most. The doctor's feelings are hurt, perhaps, but that is a comparatively small matter. The family becomes watchful, wasteful, and impatient; and they go from one form of healing to another until, in many instances, death kindly comes to the relief of the patient; and then, sometimes, the family, in its holy sanctimony, and its idea of right and justice, or the will of God, makes sundry remarks and proceeds on its way.

Instances have been known to occur where a surgeon has operated, and the patient has recovered from the operation, but has not recovered from the disease. The family is patient for a time. It puts up with the misfortune of the patient, and finally begins to speculate why the patient was not allowed to die in peace. In one instance the writer knows of, a man was operated on and failed to recover from anything but the surgical operation. The wife wrote letters, first, of anxiety, then of indignation, and, finally, she threatened prosecution for malpractice. This is a part of the day's work, and the doctor must bear his share of the burden.

Let us turn a moment to another side, where the patient is willing to do as the doctor says, and the family is co-operating more or less willingly, but the friends, the dear friends, who consist of brothers and sisters, school-mates, aunts and uncles, grand-parents, and distant relatives and passing acquaintances—all join in a mad rush of inquiry, and all have a different opinion as to what should have been done and what should be done at the present moment. This sort of thing leads the doctor a merry chase, and, unless he has himself pretty well in hand, his indignation over-steps the bounds of propriety and he speaks his mind, but he does it in order to protect his patient as well as himself. The inquiring friends, either near or remote in their relationship to the patient, are almost always an unavoidable nuisance. They contrive, by all sorts of methods, to get into the sick-room, and not infrequently they succeed. Of course, the doctor who is easygoing in his methods and permits visits to his patients does not always see the reason for the failure of his patient to respond to his treatment, while, in many instances the reason can be found either in the family or in the friends. The only sure way of relief from this unforunate condition of affairs is for the doctor, the patient,

and the family to enter into an ironclad agreement, first, that the patient and the family are satisfied with the doctor and the diagnosis. In supporting this position the doctor should give the best that is in him, and should do everything in his power to analyze his case, to take a careful history, and then to follow it with a careful physical examination. If he does these things the patient and the family are usually satisfied that he is an earnest, truth-seeking, careful physician or surgeon. When this agreement has been reached there should be a definite financial understanding. Many doctors should be whipped into line to make their business end of a possible complication a definite and an understandable agreement. Of course, this is not necessary for those who are skilled in business methods or have certain definite financial methods which they invariably follow, but to the average man this does not place itself in sufficient prominence. Most doctors are too good-natured, too easy-going, and too slip-shod in the business end of their affairs, and the result is very discouraging, partly from the patient's point of view and partly from the financial point of view.

The third point to be made is, that, following the satisfactory settlement of the first two, the doctor should be in supreme charge; the patient should obey the rules and heed the advice of the doctor, and the family should support him in this. If this support is given, and this combination is formed, it is not so difficult to deal with the solicitous, meddlesome, and ill-advised friends who appear on the scene. They are simply told in a gracious way that the patient is doing this way or that way. No details should be given them unless the family so permit, and they should not be encouraged in any way to visit the patient or upset his equanimity, and they should be further discouraged from taking up too much of the doctor's time.

In the majority of cases that are outside of the emergency surgical operations, the patient is far better off without the constant visits of the family. He is given an opportunity to rest and to be relieved of all the strains and stress of his former daily life, and he could settle down then with a better conviction in his mind that he was going to get well. Some families, of course, know how to deal with the sick. They are gentle, quiet, unobstrusive, and encouraging. In spite of this, many of our patients should be isolated, and certainly from the outside circle of needless curiosity seekers. This isolation, which simply opens the door for the doctor, the patient, and the nurse, is usually ideal, and the family is frequently willing to submit to reasonable rules and regulations. Occasionally, however, they submit only for a short time, when their curiosity, their anxiety, and their desire to intervene get the best of them, and they attempt to invade the room of the sick person at perhaps the most critical period of the convalescence, not knowing that they are upsetting the patient and retarding his recovery. It requires, therefore, a firm, guiding hand to prevent the family from over-stepping the bounds of medical propriety, and it sometimes requires screened doors and iron bars to keep out the solicitous friends who think they could be of so much benefit to the patient.

Regulation, isolation, and discipline hurt no one, and the fears of the family that the patient is going to be lonely is only a fear. If the family and friends did but know it, there are a great many patients who are delighted to be rid of their families and supposed friends. But, in this age of convention, everyone must be more or less polite, and it is very difficult, sometimes, to carry out these definite and well-laid principles.

We fear most of all the family that knows more than the doctor, and the shortest way out of this difficulty is to refer them to someone else. So far as the inquiring friends are concerned, we need great strength and a prayerful attitude to keep us from absolute and unutterable profanity or the crime of slaying or maiming these self-imposed advisors.

What doctor has not looked down upon the face of his patient who has gone from bad to worse simply because of the untimely intervention of his family and friends, who, down in his heart, knows that if the patient had been let alone the chances for recovery were good? And is there a doctor living who would not give most of his possessions to be able to say to the patient, "I can do so and so for you; the results will be improvement and recovery, or whatever the case may be, if I can have you in a hospital where you will be definitely and carefully under my supervision and without a host of people to annoy you and worry me"?

The doctor in the city has an advantage over his brother in the country. As a rule the former places his patient from the country in a hospital under the care of a nurse or in a hospital ward, and the family returns home. This part of it is easy. Writing to the family as to the progress of the patient is easy; but, finally, when the vari-

ous members of the family begin to come in or send in their friends, their ministers, and their acquaintances, it is a different matter. Then the doctor must show his skill as a tactician, and see whether, by bland and smiling words, he can overcome the difficulties—or, if need be, shut down on any proposition made by the family or friends, and tell them the patient is in his hands and he will not be responsible for any interference except his own. The doctor in the country, however, is obliged to put himself in an entirely different position. He not only has to care for the patient, but he has to suffer from the advice of the family, and particularly of the outsider; and suffer he does, but he can neither sidestep it nor get away from it except by stepping into a swiftly moving automobile. He is given less chance to make a careful investigation, or carry out a careful line of treatment, unless he has a professional nurse to support him; otherwise the directions are carried out in a perfunctory matter; and may the Lord help the patient, for sometimes the doctor cannot under various adverse conditions.

MISCELLANY

COMMITTEES OF THE NORTH DAKOTA STATE MEDICAL ASSOCIATION

The following committee appointments have been made by Dr. W. P. Baldwin, president of North Dakota Medical Association:

CONSTITUTION AND BY-LAWS—
Dr. C. M. Williamson, Grand Forks.
Dr. E. A. Pray, Valley City.
Dr. A. J. McCannel, Minot.

VENEREAL DISEASES—
Dr. F. R. Smyth, Bismarck.
Dr. H. H. Healy, Grand Forks.
Dr. J. E. Countryman, Grafton.

MEDICAL EDUCATION—
Dr. H. E. French, University.
Dr. W. F. MacManus, Williston.
Dr. G. J. McIntosh, Devils Lake.

CANCER—
Dr. Jas. P. Aylen, Fargo.
Dr. W. F. Sihler, Devils Lake.
Dr. E. P. Quain, Bismarck.

MEDICAL LEGISLATION—
Dr. V. J. LaRose, Bismarck.
Dr. Charles MacLachlan, New Rockford.
Dr. F. R. Smyth, Bismarck.

NECROLOGY—
Dr. L. H. Labbitt, Enderlin.
Dr. P. H. Burton, Fargo.
Dr. W. A. Gerrish, Jamestown.

TUBERCULOSIS—
Dr. James Grassick, Grand Forks.
Dr. Fanny D. Quain, Bismarck.
Dr. J. G. Lamont, Dunseith.

PUBLIC HEALTH—
Dr. C. J. McGurren, Devils Lake.
Dr. M. E. Trainor, Williston.
Dr. A. D. McCannel, Minot.
Dr. R. D. Campbell, Grand Forks.
Dr. T. C. Patterson, Lisbon.
Dr. T. O'Brien, Wahpeton.
Dr. A. W. Macdonald, Valley City.
Dr. H. O. Altnow, Mandan.
Dr. Geo. B. Ribble, LaMoure.
Dr. A. A. Whittemore, Bowman.
Dr. Geo. A. Perkins, Dickinson.
Dr. P. G. Arzt, Jamestown.
Dr. Syver Vinje, Hillsboro.
Dr. John Crawford, New Rockford.

WILL THE FLU RETURN?

Authoritative statement issued by the U. S. Public Health Service. (Published at the request of the Bureau of Public Health Service.)

Probably, but by no means certainly, there will be a recurrence of the influenza epidemic this year.

Indications are, that should it occur, it will not be as severe as the pandemic of the previous winter.

City officials, state and city boards of health, should be prepared in the event of a recurrence.

The fact that a previous attack brings immunity in a certain percentage of cases should allay fear on the part of those afflicted in the previous epidemic.

Influenza is spread by direct and indirect contact.

It is not yet certain that the germ has been isolated, or discovered, and as a consequence there is yet no positive preventive, except the enforcement of rigid rules of sanitation and the avoidance of personal contact.

A close relation between the influenza pandemic and the constantly increasing pneumonia mortality rate prior to the fall of 1918 is recognized.

It is now believed that the disease was pretty widely disseminated throughout the country before it was recognized in its epidemic state. This failure to recognize the early cases appears to have largely been due to the fact that every interest was then centered on the war.

The above are the important facts developed by the United States Public Health Service after a careful survey and investigation of the influenza pandemic of 1918-19, carried on in every state and important city, and even in foreign countries.

No one of the many experts of the Service would make a more positive forecast of the all-important question, will there be a recurrence? All agreed, however, that a recurrence was not unlikely, and in the face of the known facts, that it would be wise to be prepared, more with a view of being on the safe side than actually anticipating danger.

CORRESPONDENCE

THE MEDICAL PROTECTIVE COMPANY OF FORT WAYNE, IND.

To the Editor:

In an article on page 459 of your issue of September 1, we note that in a report to the North Dakota Medical Association, by the attorneys for that Society, it is stated that the Supreme Court affirmed the verdict against two doctors at Kenmare, North Dakota, and "one of the insurance companies paid their proportion of the loss. The balance of the loss was covered by insurance with The Medical Protective Association of Fort Wayne, Indiana, and I have never heard whether they settled for their share of the loss or not."

Coincident with the final verdict in the suit, and with promptness equal to any other organization interested in the case, The Medical Protective Company paid its portion of the loss sustained in the suit. Further, the amount expended by the Medical Protective Company was several thousand dollars more than was spent by any other organization which took part in this litigation; and these payments were made a year before the publication of the article in your journal.

While we do not believe that the attorney for the Association had any intention or desire to reflect upon this company, and perhaps no practitioner would presume that we had not fully lived up to our contract, at the same time we trust you will give the same publicity to our statement of facts as you did to the article referred to.

Very truly yours,

E. F. Miller,
Ass't. Secretary.

The report referred to was a part of the transactions of the North Dakota State Medical Association, and of course covered the work of the association for the preceding year. All physicians know of the promptness of the Ft. Wayne Company in the payment of its insurance.—The Editor.

NEWS ITEMS

Dr. H. E. Dunham has moved from Elgin to Minneapolis.

Dr. R. L. Laney has moved from Brown Valley to Bemidji.

Dr. H. T. Sherman has moved from Minneapolis to Franklin.

Dr. C. M. Adkins has moved from Grygla to Thief River Falls.

Dr. N. T. Owen has moved from Lead, S. D., to Rapid City, S. D.

Dr. W. A. Bates has moved from Northville, S. D., to Aberdeen, S. D.

Dr. W. B. Shore has moved from Red Lodge, Mont., to Bear Creek, Mont.

Dr. R. D. Farris, of St. Louis, Mo., has located at Lake Preston, S. D.

Dr. R. J. Morrisey has moved from Pierre, S. D., to Fort Pierre, S. D.

Dr. E. T. Anderson has moved from Platte, S. D., to Des Moines, Iowa.

Dr. George H. Ogle, of Volga, S. D., has gone to Norway for an indefinite stay.

Dr. G. S. Frogner, of Mayville, N. D., is in Chicago doing postgraduate work.

Dr. Carl H. Schmidt, of Northfield, reached New York from France last month.

Dr. J. E. Campbell, of South St. Paul, has been appointed school physician for that place.

Dr. Carl Robertson, who recently completed his service in the navy, has located at Grove City.

Dr. W. B. Lakey, of Great Falls, Mont., has returned from war service, and resumed practice.

Dr. Charles F. Jump, of Bozeman, Mont., has completed service in the army and resumed practice.

Dr. W. F. Bleifuss has moved from Elgin to Rochester, where he will enter public health work.

Dr. Charles A. McDonald has moved from Ogilvie to St. Paul, and is located at 719 Hamline Ave.

Dr. O. S. Watkins, of Carlton, has gone to Billings, Mont., for a rest, and may retire from practice.

Dr. Waud W. Giessler, of St. Paul, who has resumed civil practice, will limit his practice to orthopedics.

Dr. J. C. Denny, who entered army service from Clyde Park, Mont., has returned, and located at Hardin, Mont.

Dr. Avis C. Eaton, of Princeton, has returned from Europe, where she has been doing postgraduate work, working in Edinburgh and London.

The Pipestone Clinic has been organized by Drs. W. J. Taylor, W. E. McKeown, and W. E. Richardson, all of Pipestone.

Dr. H. J. Thornby has moved from Barnesville to Moorhead, and become associated with Dr. V. E. Verne, of that city.

Dr. R. G. Wright, who entered the service from East Helena, Mont., and served in France, has located at Augusta, Mont.

Dr. Charles R. Ball, of St. Paul, gave a report of the work of the Medical Corps, in the *Pioneer Press* of Sunday, September 14.

Dr. John H. Moore, recently returned from army service, has joined the firm of Drs. Healy, Law & Woutat, of Grand Forks, N. D.

Dr. John W. Lee, of Minneapolis, has returned from army service, and resumed his practice in eye, ear, nose, and throat work.

Dr. W. E. Richardson has moved from Slayton to Pipestone, and has become a member of the Pipestone Clinic, mentioned above.

Dr. M. Rodman, who has been many years in Indian service at Onamia, has accepted a position at the White Earth Agency at Ponsford.

Dr. O. N. Meland has moved from Grand Forks, N. D., to Warren, Minn., to join in work with the Drs. Bratrud in the City Hospital.

Dr. J. M. Dodson, of Ashland, Wis., will erect a physicians' building in that city to contain seven suites of offices for physicians and dentists.

Dr. M. O. Pemberton, of Deadwood, S. D., has returned from military service, and resumed his practice in eye, ear, nose, and throat work.

St. Joseph's Hospital of Deadwood, S. D., has taken steps to become a standardized hospital under the plan of the American College of Surgeons.

Dr. C. R. Thornton has moved from Rice, Washington, to Missoula, Mont., where he becomes associated with his brother, Dr. W. T. Thornton.

Dr. J. W. Chamberlain, of St. Paul, was elected deputy grand master of the Knights Templar at the triennial conclave, held in Philadelphia, last month.

The University of Cincinnati has opened a one-year course of training to fit men and women, laymen or physicians, to fill hospital executive offices.

Dr. V. J. Schwartz, a recent graduate of the University of Minnesota Medical School has become associated with Dr. V. M. Miller, of Mellette, S. D., under the firm name of Drs. Miller & Schwartz.

A physician of Duluth, found guilty last month of violating the Harrison drug act, was fined $1,000, and a layman, who pleaded guilty, was fined $3,000.

Dr. F. T. Brigham has returned to Watkins, and repurchased the practice he sold some months ago. He worked in the Mayo Clinic during his absence.

Dr. Alexander Josewich, of Minneapolis, has been appointed city inspector of suspected cases of influenza by Dr. H. M. Guilford of the City Health Department.

Dr. G. H. Rathburn, who formerly practiced in Lead and Bellefourche, S. D., died last month at Fremont, Neb., where he had conducted a hospital for some years.

Dr. R. H. Wald, of Hastings, has been appointed chief surgeon of the Armour Packing Plant of South St. Paul, and has moved to that place from Hastings.

Dr. J. H. Higgins, of Minneapolis, has gone to New York to do postgraduate work in the Postgraduate Medical School of that city for the remainder of the year.

Dr. Fred F. Stocking, who practiced in Southern Minnesota several years ago, has returned to the state, and has formed a partnership with Dr. F. L. Kling, of Milaca.

Dr. R. C. Radabaugh, who has been doing special work at the Mayo Clinic since returning from France, has become associated with Dr. L. D. Peck, of Hastings.

Chamberlain, S. D., was the banner city of South Dakota in the modern health crusade conducted by the National Tuberculosis Association and the Junior Red Cross.

Dr. J. C. Michael, of St. Paul, who recently returned from Berlin, where he went with the American Food Commission, says a regime of disorder existed in Berlin.

Dr. O. J. Seifert, of New Ulm, who recently returned from France, has formed a partnership with Dr. J. H. Vogel, of that city, under the firm name of Drs. Vogel & Seifert.

The two physicians of Ellendale, Minn., have leased the only livery stable in the place, and will conduct it in order to provide horses for their own work when autos will not run.

Dr. L. H. Rutledge, who recently moved from Minneapolis to Detroit, has formed a partner-

ship with Dr. O. O. Larsen, of that place. The new firm name is Drs. Larsen & Rutledge.

Dr. S. E. Schwartz, of Butte, Mont., after the completion of his army service, took three months of postgraduate work in New York City, and has now resumed practice in Butte.

Dr. Frank W. Mackay recently resigned as medical director of Mudbaden at Jordan, Minn., and has accepted a like position with the Sacred Heart Sanitarium of Milwaukee, Wis.

Dr. L. B. Baldwin, superintendent of the University Hospital, Minneapolis, was elected president of the American Hospital Association at its twenty-first annual meeting, held last month in Cincinnati, Ohio.

The Woman's Auxiliary of the Hennepin County Medical Society will give a dinner tomorrow (Oct. 2) at the Hotel Leamington for the wives of the physicians attending the State Medical Association.

The St. Paul Clinic, with headquarters in the Lowry Building, has been formed by the following St. Paul physicians: Drs. W. C. Carroll, H. G. Wood, J. N. Dunn, C. W. Fogarty, B. Leahy, and R. Leavenworth.

Dr. Guilford, Health Officer of Minneapolis, requests all Minneapolis physicians to report their influenza cases in accordance with the state law, and thus assist in preventing a possible epidemic this fall and winter.

The Minnesota Public Health Association, working with the State Dental Society, will give dental clinics throughout the state. No dental treatment will be given at these clinics, as they are solely for diagnostic purposes and advice.

Dr. H. V. Hanson, of New London, has returned from Europe after two years' absence, and resumed his practice, which has been in the charge of Dr. M. O. Oppegaard, of Minneapolis. Dr. Oppegaard will return to Minneapolis.

The following names belong on the roster of the North Dakota Association, published in our issue of September 1: Dr. J. M. Caldwell, Wimbledon; Dr. Sidney B. Clark, Buffalo; Dr. A. C. Gronvold, Fort Ransom; and Dr. P. O. C. Johnson, Watford.

U. S. Surgeon-General Blue has requested the names of 100 Minnesota physicians who will serve in case an influenza epidemic occurs this winter. The salary will be $200 a month with $4.00 a day for subsistence and an allowance for transportation. Volunteers should register with the Minnesota State Board of Health.

The invited speakers at the banquet (Thursday night) of the State Medical Association will be Governor J. A. A. Burnquist, President M. L. Burton (University of Minnesota), and Dr. W. W. Harrick, Associate Professor of Medicine of Columbia University.

Dr. George R. Curran, of Mankato, died last month at the age of 56. Dr. Curran had practiced in Worthington several years before moving to Mankato, where he began practice in 1902. He was a graduate of the University of Michigan Medical School, class of '92.

At the first autumn meeting of the St. Louis County Medical Society, held at Duluth on Sept. 11, Dr. E. J. Huenekens, of Minneapolis, contributed a paper on "The Care of the New-born," which was read by Dr. E. D. Anderson, of Minneapolis, the writer of the paper being unable to be present.

Dr. T. A. McKenzie has returned to Miles City, Mont., to resume practice after four years of army service. He first joined the British service, and went to Mesopotamia; and when America entered the war he joined the American Medical Corps and served in France. He held the rank of major.

Dr. H. D. Newkirk has moved from Minneapolis to Anaheim, Calif., to join the staff of the Clinic of Drs. Johnston & Wickett. Dr. Newkirk did an amirable work in Minneapolis in connection with Judge Waite so long in charge of the Juvenile Court. He placed the city under very great obligation to himself.

The names of the following physicians should be added, as new members, to the roster of the South Dakota State Medical Association: Dr. E. C. Davis, Eagle Butte; Dr. Charles N. Brooks, Summit; Dr. W. A. Bates, Aberdeen; Dr. George F. R. Pugh, Wallace; Dr. G. M. Morton, New Effington; Dr. S. A. McClelland, Kenebec; and Dr. S. A. Young, of Lennox.

It is reported that some nurses are seeking work as graduates from the training-school of St. James Hospital and Sanitarium, of St. James, while they have had a course there of only one or two years. Physicians and hospital superintendents should be on their guard against such persons. A note to the sanitarium is sufficient to obtain a record of their students and graduates.

Dr. J. C. Baker, secretary of the Third District Medical Society of South Dakota, informs us that the first fall meeting of the socitey, held

on Sept. 17 at Madison, was a fine and enthusiastic one, and was well attended. Two excellent papers were presented and were fully discussed. The first paper was on the "Modern Treatment of Osteomyelitis," by Dr. F. B. Gillis, of Mitchell, and the second was by Dr. S. J. Billion, of Sioux Falls, on the "Intraspinal Treatment of Locomotor Ataxia."

Dr. E. P. Quain, of Bismarck, was the only physician in North Dakota to hold the rank of lieutenant-colonel in the Medical Corps in the recent war. The following physicians of that state attained the rank of major: Drs. Robt. D. Campbell, H. H. Healey, and W. E. Hunt, of Grand Forks; Dr. J. P. Aylen, of Fargo; Dr. J. A. Carter, of Warwick; Dr. J. E. Countryman, of Grafton; Dr. W. A. Gerrish, of Jamestown; Dr. J. A. McCannel, of Minot; and Dr. T. C. Patterson, of Lisbon.

The Minnesota Academy of Medicine held its annual meeting on Sept. 10. After the reading of a paper by Dr. Franklin R. Wright, of Minneapolis, on "Why Venereal Diseases Continue to Exist," the election of officers took place, and resulted as follows: President, Dr. H. B. Sweetser, Minneapolis; vice-president, Dr. Warren Dennis, St. Paul; secretary-treasurer, Dr. Fred E. Leavitt, St. Paul (re-elected). The Executive Committee, consisting of Drs. C. M. Carlaw (Minneapolis), Dr. H. P. Ritchie (St. Paul), and Dr. H. W. Jones (Minneapolis), was re-elected. The election of new members was postponed.

PUBLISHER'S DEPARTMENT

REMOVAL NOTICE

The Denver Chemical Mfg. Company has moved its New York (home) office to 20, 22, and 24 Grand Street, while its Laboratory and receiving and shipping departments are at 23, 25, and 27 Sullivan Street.

The steady and continuous growth in the business of the Denver Chemical Mfg. Company ought to be sufficient evidence that the thousands upon thousands of physicians and surgeons who use and recommend Antiphlogistine to their patients have assurance that the remedy has real merit. If it has none then human intelligence must have lost its powers of observation, which it has not, and it would be foolish to claim the contrary.

STILL ROCK SPA

This institution, located at Waukesha, Wis., is a 100-room modern health-resort hospital; and the work of the institution is exclusively in cases of diabetes and Bright's disease, now known to yield most readily to institutional treatment.

Still Rock Spa is doing excellent work in this line, and probably no other institution of the kind in the country is doing better work. Dr. A. J. Hodgson, the medical director, is an expert in this work, and has carried his institution to a high degree of efficiency.

Physicians having patients in need of personally directed institutional treatment will do well to correspond with Dr. Hodgson.

ATOPHAN

The manufacturers of Atophan, a remedy for use in gout, rheumatism, and conditions induced by focal infection or defective metabolism, say it has been stamped with the "universal seal of approval." This does not mean that Atophan is a cure-all, but that the medical profession has well-nigh universally found it helpful in certain well-defined conditions of obscure origin.

The high-standing and unquestioned integrity of this firm of manufacturing chemists, Messrs. Shering & Glatz, are a sufficient guaranty that Atophan is a remedy with which every physician should be acquainted, for all physicians know how difficult the above-named conditions are to combat.

Literature of Atophan will be furnished by Messrs. Schering & Glatz.

DIPHTHERIA ANTITOXINS

In a study of a series of one thousand deaths from diphtheria, Dr. Bernard W. Carey, epidemiologist of the Massachusetts State Board of Health, found that there is an amazing laxity in securing early diagnosis and treatment, the fault of both parents and physicians, the former because they do not realize the gravity of early symptoms, the latter because they do not always promptly or most efficiently apply their knowledge. It is a sad commentary on parental care that 11.8 per cent were moribund at the physician's first visit. Physicians seemed frequently to have postponed administering antitoxin until a culture could be made, losing several vital hours; or they apparently hesitated to use it in sufficient amounts; and none took advantage of the intravenous method, which would have been advisable in those cases seen late in the disease.

Diphtheria Antitoxin made by Eli Lilly & Company will be found highly potent always. In cases seen early, good practice has established the fact incontrovertibly that results depend absolutely upon its prompt and liberal use.

THE F. & M. BANK OF MINNEAPOLIS

The past generation has seen the development of two modern institutions to meet modern needs—institutions that some men do not, for almost inexplicable reasons, use to their own advantage. We refer to the life insurance company and the savings bank.

Easily at the head of such banks in the Northwest is the Farmers & Mechanics Bank of Minneapolis, which is safe beyond any question, and which is constantly striving to meet family needs. Its "Joint and Several Account," its "Trust Account," its "School Savings Account," and its common or individual account are interesting to every person, and physicians especially should have one of such accounts in such a bank.

THE FRANKLIN SANITARIUM

The above sanitarium is one of those home institutions of limited capacity of which there can never be too many when under efficient management, as we believe the Franklin to be. Here the liquor or drug addict or the patient with a mild nervous or mental disease finds a care, a home-like feeling, and a sympathy that are only second to the scientific treatment of his own physician or that of the medical director.

The Franklin Sanitarium, with its moderate charges and good care, meets a constantly growing need of the profession for their patients that must be sent to an institution; and the personnel of the staff is excellent.

For rates and detailed information address the Franklin Sanitarium, 2000 Third Avenue South, Minneapolis.

PRIVATE MATERNITY HOME

The Journal-Lancet has admitted to its columns in many years the announcement cards of only two or three maternity homes, while refusing many. The reason for such a course is manifest to medical men who have the unpleasant duty of sending prospective mothers to these "homes."

The necessity for the home is manifest; and the opportunity to deal dishonorably with the unfortunates has been so abused that even the state can hardly correct. It can be overcome in every case by the doctor who will send these unfortunates to an honorable woman, such a woman as Mrs. Cora Morey, superintendent of the Private Maternity Home, 2014 Twenty-sixth Ave. So., Minneapolis. She is a woman of character and executive ability, and has the confidence of our State officials and of our social and welfare leaders.

MAKING THINGS WELL

The labor question is the most serious problem before the world today, and it is not altogether a matter of wages, for the employer can adjust his business to any wage by adding his percentage of profit the

cost of his products. The serious difficulty is with the character of the work he buys. No readjustment can be made when the work is inferior, and that is the character of much work today.

Inferiority in the manufacture of pharmaceuticals would overthrow medicine. One pharmaceutical house said this many years ago, and adopted the motto of the caption of this brief notice of that house, Messrs. Sharp & Dohme, established in 1860. Their products are made so well, so carefully, that if life depends upon the manner of their making no life will be sacrificed. For nearly 60 years this house has made every one of its products in this way, and will make none in any other way.

Such pharmaceuticals are worth while.

THE STANDARD MEDICAL SUPPLY COMPANY

The above-named Company has rapidly developed, since its organization only a few years ago, into one of the largest manufacturers of and dealers in surgical instruments and hospital supplies in the Northwest, and it has recently extended its activities along pharmaceutical lines, manufacturing and importing many of the standard preparations in most demand by the medical profession.

The Company has pushed, of late, the products of the H. A. Metz Laboratories, the Takamine Laboratory, the Dermatological Research Laboratories, and the Diarsenol Company. The products of these manufacturers are in daily demand by almost every physician, and the Standard Company is always ready to fill orders without a moment's delay and at the lowest prices.

The Standard Company has made a host of friends in the profession. Its exhibit at the Radisson Hotel during the State Association meeting, will be full of interest, as have been its former exhibits on such occasions. Outside physicians can spend an hour or two very profitably at the plant of the Company at 1006 West Lake Street, or in their exhibit room at the Radisson.

SAFEGUARDING THE WEAK HEART

The sufferer from chronic heart disease needs constant attention to his digestion and nutrition. An attack of indigestion or a slight "falling off" in the nutrition may so increase the burden on an hypertrophied heart that its compensation may be lost forever. At the first sign, therefore, of digestive trouble or nutritional decline in cardiac patients, Gray's Glycerine Tonic Comp. should be administered in usual dosage. Its therapeutic action is promptly manifested, and the effect of this dependable tonic in restoring the digestive and assimilative functions to normal activity, reduces without delay the stress under which a weak and defective heart may otherwise be forced to labor.

In addition to the important service it thus renders by stimulating vital functions throughout the body, Gray's Tonic Comp. acts directly on the heart, imparting tone to the cardiac muscle and aiding and supporting its action.

To sum up the effect of Gray's Tonic Comp. in the treatment of cardiac patients, it is evident that it not only *increases the power* of the heart, but materially *decreases the "load"* it has to carry.

NEGATIVE OR POSITIVE?

Is the gauze which you use on wounds of a negative or positive character? In other words, is the gauze merely negatively aseptic, meaning that it will not of itself infect the wound; or is it positively antiseptic, with the faculty of keeping out infection and of inhibiting infectious processes in the wound itself?

Given the choice of the two, surely the latter is to be preferred.

Such a dressing is Chlorazene Surgical Gauze, a new addition to the well-known Chlorazene family, supplied by The Abbott Laboratories of Chicago, which is now introducing it as "the fighting dressing for wounds." We who are familiar with the well-known action of Chlorazene, can well believe that it marks another step forward in the modern dressing of wounds.

Chlorazene Surgical Gauze, we are assured by The Abbott Laboratories, contains more than 5 per cent of impregnated Chlorazene, guaranteed, not only at the time of manufacture, but also at the time of use. To support this they show that a strip of the gauze which assayed 6.44 of Chlorazene was kept under ordinary conditions for over six months and at the end of that time assayed 6.35—a loss of less than one-tenth of 1 per cent.

Chlorazene Surgical Gauze is now being marketed in one-yard and five-yard rolls. Its price compares favorably with other antiseptic gauzes on the market. Its greater effectiveness, due to the greater potency of Chlorazene over the substances commonly used as antiseptics, should be taken into consideration.

Physicians are invited to try this new surgical gauze at the expense of The Abbott Laboratories. A postcard or any other form of request for a trial strip will be taken care of promptly. We suggest sending for yours today.

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THE IOWA PITCH RANGE AUDIOMETER*

BY CARL E. SEASHORE
Professor of Psychology, State University of Iowa
IOWA CITY, IOWA

Instead of simply enumerating or classifying the recent contributions of experimental psychology in medicine, as might be suggested by the title on the program, I shall take the liberty of describing one contribution which is the outcome of the co-operation of the departments of Otology, Physics, and Electrical Engineering with Psychology in the University of Iowa. This contribution consists of a method of measuring, quickly and accurately, the sensitiveness of the ear to a pure tone at any and every pitch within the range of hearing of the ear.

THE APPARATUS[1]

Suppose that you connect two telephone receivers by the free ends of the cords, and then unscrew the cap of one and lay a nail across the magnets. Every time you raise and lower that nail you will hear a click in the receiver. Now, suppose that, in place of the nail, we use a

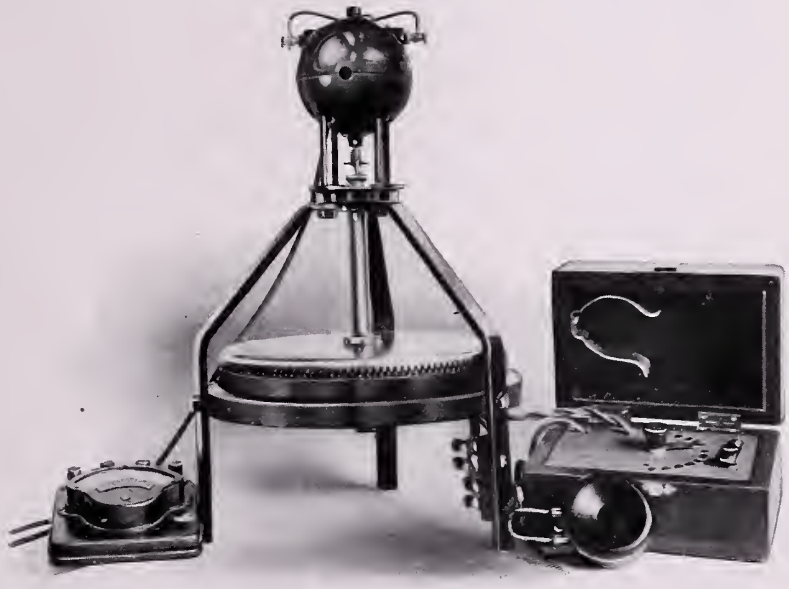

Fig. 1. The Pitch Range Audiometer.

*Read at the Annual Meeting of the Montana State Medical Association at Missoula, July 19, 1919.

1. The apparatus and the method of its use have been developed by a graduate student, Mr. C. C. Bunch. To Prof. A. H. Ford is due the credit for technical details in the designing of the instrument. A full account will appear in Vol. VIII of the University of Iowa Studies in Psychology.

toothed wheel, such as a gear-wheel, in which the spacing of the teeth corresponds, either directly or in multiple, with the spacing of the two prongs of the magnet. Then, if the magnet is held in proper position before the wheel and the wheel is revolved slowly, the magnetic arc is formed every time a pair of cogs passes in front of the pair of poles. This will result in one pulsation of sound in the listening receiver for every time such an arc is formed by the passing of the cogs. By speeding up the wheel the pulsations gradually become a tone, and for higher and higher speeds we get corresponding pitches of the tone. By varying the shape and spacing of the cogs and the poles and the adjustment of one to the other, the variation in the current can be made to conform with the sine curve, which is a condition for the production of a pure tone.

This is the principle on which the instrument is made. Two toothed wheels in the center of Fig. 1 take the place of the magnet and the arc, respectively, each tooth of the lower wheel being a magnet pole, and the teeth in the upper wheel acting as cogs. The instrument at the top is an electric tachometer, which measures the speed of revolution in terms of the readings on the galvanometer at the left. The telephone at the right is connected through a resistance-box in which the strength of the sound can be varied by the turning of the contact for different resistances in a shunt. The wheels are revolved by means of a series-wound motor, through which the speed can be controlled by varying the resistance. Such are the essential parts for the generation of the tone, with contrivances for varying under control and reading instantly of the pitch and the intensity of any tone. In the final model all parts are assembled in a compact chest, suitable for the physician's office.

NEED OF SUCH MEASUREMENTS

In the otological clinic, the determination of the sensitiveness to tone by means of tuning-forks, is a slow and uncertain process, and, at best, tests only for specific pitches of the forks. By means of this instrument, the *acuity of hearing can be measured quickly and accurately for any and all pitches within the tonal range with a pure tone.*

The listener is seated with the telephone receiver to his ear and a signal key in his hand, and is told to press the button whenever he begins to hear a tone and promptly to release the key when he ceases to hear the tone. By this means a signal lamp is lighted whenever the tone is heard. The physician then sets the audiometer for a clearly audible tone, and makes a single sweep at this intensity from the lowest audible to the highest audible tone as indicated by the responses of the listener. He then weakens the tone, making a corresponding sweep in successive stages down to the faintest tone that can be heard at any pitch. By marking the

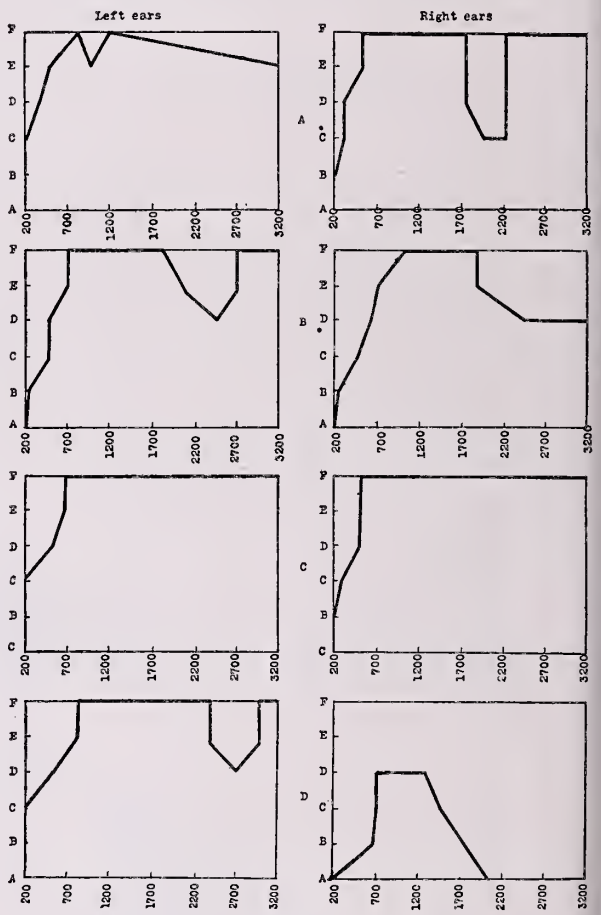

Fig. 2. Charts of Tonal Hearing.

The pitch levels are indicated roughly in terms of vibration frequency at the base. The intensities are indicated by the letters A, B, C, etc.—the loudest tone, A, being so loud that it was on the verge of being painful to the sensitive ear, and F, so faint that only keen ears could hear it. The ability of a very good ear is represented both in pitch and in intensity by a rectangle. Deviation from the rectangle shows a corresponding defect.

appearance and disappearance of the tone on a chart he obtains a concrete outline of the sensitiveness of the ear for different pitches showing a true profile, with its possible gaps and peaks at various pitch-levels. Any point of special interest may be verified by surveying for that particular pitch in greater detail.

This test can be made in one-tenth of the time that it takes to make a thorough test with tuning-

forks. It gives vastly more complete details, and the measurement of intensity is made in terms of the same standard for all pitches.

HISTORICAL

This method of measurement has a rather interesting history. It starts out with the usual audiometer measurements, by means of the click and single tone by my audiometer which has been in use for eighteen years. The pitch range feature was first added for the purpose of measuring this particular factor of musical capacity. In the war service special impetus was given to the matter by the call for methods of selecting those whose ears were exceptionally qualified for using submarine detectors. This, in turn, led to the demand by the Government for an instrument which could be used in exact civil service examinations of hearing. Incidentally, the examination of normal adults and children led to the discovery of a very common occurrence in children, as well as in adults, of defect of hearing indicated by these measurements as evidences of inceptive disease in the ear. The instrument is, therefore, being prepared for use in the public schools to discover inceptive ear-deterioration in time for treatment. During the war we were also called upon to devise methods for selecting radio operators. We found that it is of very great importance, in this form of vocational selection, to eliminate those who have defective ears. Fig. 2, taken from the author's "Psychology of Musical Talent" (Silver, Burdett & Co., 1919), shows a series of records of the first four candidates for appointment in this service. An unbroken parallelogram would indicate a superior ear; a break in the rectangle by a jagged line for different pitches and to various depths, is a measure of defective hearing. For example, observer D has a gap at a pitch of 2,700 vibrations in the left ear, and is not capable of hearing ordinary conversation with the right ear alone.

Thus, this measurement, first developed in the interest of vocational guidance in the art of music, has found uses of inestimable value in otology, in civil service, and in vocational education and vocational guidance.

ACUTE MELANOTIC CARCINOSIS*

By W. F. Sihler, M. D.
DEVILS LAKE, NORTH DAKOTA

Melanotic tumors were first noticed in the lower animals, and the first records we have were made from specimens from the horse in 1784. Lænnec, in 1806, first noted this condition in the human race, and described them under the title of "melanotic tumors."

Since then a great deal of work has been done by a large number of pathologists, aiming to find a cause and a classification that would accommodate the various histological forms found. If the literature is a criterion as to the results obtained, then I can say that they are still far from agreeing on either the cause or classification.

As to cause: Coley and Hoguit believe this class of tumors to be infectious, produced by some micro-organism or virus capable of producing a cell-development in pigmented tissues after those tissues have been reduced in resistance by trauma or repeated irritation. In support of their belief they quote Profs. Leyton, Gouyon, Klerk, and Queyrat, who have independently injected various animals, from rats to monkeys, with melanotic growths, and gotten new growths to develop of the same histological structure. They themselves have not succeeded in transplanting these growths very successfully.

This does not prove to me, however, that these growths are caused by micro-organisms or a virus, because why might not these melanotic cells have the power of regeneration in themselves by virtue, perhaps, of the melanin they contain, if placed in susceptible environment? Some authorities believe that it is the melanin itself which excites the cells to excessive growth, while others believe the cells, from trauma or chronic irritation, take on this abnormal development and, in so doing, increase the amount of pigment, which is a normal constituent of the cells.

Wieting and Homdi believe that chronic irritation will increase pigmentation without increasing cell-division, and explain the pigmentation found in Röntgen rays and sunlight in this way.

They also hold that excessive production of pigment is an expression of pathologically increased function of the cell which ends with its

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death, and, further, that melanin is produced solely by the epithelium, and in itself has not the power of reproduction.

As to classification: A careful perusal of the literature will not let us definitely classify these tumors as to their histology. Generally speaking, these growths have been accepted until recently as being of connective-tissue origin and classified as sarcomas, but now most of the investigators believe them of ectodermal origin.

W. Sampson Hadley, after very careful study, believes conclusively that all melanotic new growths are of connective-tissue origin. This view is held also by Mallory and Ribbert and Stromeyer.

On the other hand such men as Eve, Chalier, Müller, and others believe them to be of ectodermal origin, and they cite, as a very strong point in the determination of the kind of cells that these tumors spring from, that the original cells normally contain pigment.

Virchow and Una believe they may be of either epithelial or connective-tissue origin.

The case I have to report was easily diagnosed as carcinoma, but presents the interesting features that the primary focus or even the secondary deposit showed no evidence of melanin, but later the metastases showed it very profusely, as the specimen here will show.

This feature is dealt with very sparingly in the literature, and I can find nothing that attempts an explanation. Dr. J. W. Cox, however, who has kindly assisted with the pathology in this case, informs me that it is not infrequent and that he personally has had the opportunity of following three such cases since coming to this state. He does not offer an explanation as to the probable time, place, method, or cause for the change to a melanotic condition.

CASE

January 15, 1916. Mr. B., aged 61, white, German, married, and has a large family.

Family and personal history, negative.

Present trouble.—The patient attempted about four months ago to remove a corn on the fourth little toe of the left foot. A sore developed and soon became larger and deeper and having a disagreeable discharge. About a month later he first noticed a little lump in the left groin, which has gradually enlarged.

Examination showed the sore on the little toe to be an angry-looking ulcer with edges somewhat undermined and thickened. The swelling in the groin was about the size of a small hen's egg, elevated somewhat above the surface, somewhat tender and fairly movable. No other enlarged glands were found even by rectal examination. There was no enlargement of the liver; and the heart, lungs, and abdomen were normal.

The toe was amputated, and the lump excised with as many of the inguinal glands as could be removed, the following morning.

The lymphatic involvement was, macroscopically, very limited; only two or three other glands were found slightly enlarged. Both wounds healed promptly, and February 3d the patient was discharged. He was told of the nature of his trouble, and was advised to return occasionally for examination.

The patient returned one year later, and stated that for the past two weeks he had been suffering from intense thirst, and was passing large quantities of urine. He was told by his doctor not to eat any sugar. The urine was negative for sugar, and had a specific gravity of 1018.

General examination showed no loss of weight, slight tenderness with increased resistance over the epigastrium, and a small nodule about the size of a hazelnut in the lower end of the incision in the groin. This was removed under local anesthesia, and reported carcinomatous.

He remained in the hospital thirteen days, and during this time complained only of a heavy dull sensation in the epigastrium and intense thirst. Gastric analysis and complete *x*-ray examination of the stomach showed no abnormalities there. The liver was not enlarged. The lungs and heart were normal. The urine showed a specific gravity of 1010, with no sugar.

The patient again returned to the hospital at the end of five days, and the change that had taken place was very striking. He was very thin, sallow, and so weak he could hardly walk. He complained of the same dull pain in the epigastrium, only more constant, great thirst, loss of appetite, and weakness.

Examination showed the patient to be suffering considerably from pain in the epigastrium with nausea; no vomiting; very weak and depressed. Over the chest were scattered eight small blue elevations about 0.5 cm. in diameter, also a few lumps under the skin about the size of an almond seed, freely movable. The abdomen was distended and slightly tender. No enlargement of liver could be made out.

Three days later it was noted that these spots in the skin were increasing in number, and, for the first time, there was an enlargement of the

liver. This enlargement increased very rapidly until the lower edge of the right lobe almost reached the pubes. The general condition of the patient became gradually worse, and the only new symptom developing was the loss of vision. He died fifteen days after admission the last time.

Autopsy: Complete examination was made one and one-half hours after death. Scattered over the skin were small bluish elevations about 8 cm. in diameter, and under the skin and freely movable were enlargements of about 1.5 cm. in diameter. On section these were seen to be fairly solid, dark-blue and black masses, not surrounded by inflammatory tissue.

To be brief, every organ in the body, including the central nervous system, was covered and filled with these same new growths. In the heart they extended into the ventricles a distance of 2 cm.

This case presents a number of interesting points for discussion:

1. Melanotic carcinoma is a very rare condition, of which the existence is denied by a number of our best pathologists. Hektoen claims that these tumors do develop from nevi and moles of the skin and occasionally from the true skin, that their secondary growths are melanotic, and that they travel through the lymphatics and early involve the viscera.

2. In this case the primary focus and the secondary deposits did not show the presence of any melanin, but the tertiary deposits did in large quantities.

3. The involvement of the lymphatics of the groin after passing through the popliteal glands, which were in no way affected.

4. The intense thirst and passing of large quantities of urine. This may be surmised as a condition of diabetes insipidus, caused by disturbance of the kidney function through the nervous system, or the involvement of the pituitary gland or the attempt at equalization from the rapid catabolism going on.

5. The very rapid development after a certain point, shown by the symptoms and diffuse involvement.

6. Loss of vision due to involvement of the optic chiasm and not the structure of the eyes.

7. Its origin in an injured corn on the toe.

DISCUSSION

Dr. A. G. Long (State University): I am sure we have been very much interested in the case Dr. Sihler has so ably described to us. The condition is rather rare, for the tumor began as a carcinoma, and then changed to a sarcoma. When I was in Chicago recently I talked with Dr. Zeit about this case, and he said he had seen several tumors similar to the one described by Dr. Sihler, and referred me to many German writers. However, as I am not very adept at translating the German I decided to stick to the American writers. They claim that these tumors can arise from epithelium tissue, and when they do so they do not have any pigment; when they arise from connective tissue they have chromatophores in them. Some authors claim that these melanotumors are not of epithelial origin, but of connective-tissue origin. Some others describe these melanomas as a separate classification of tumor, claiming that the alveolar arrangement they represent is typical of the squamous-cell carcinoma, but I have no doubt that in the specimen Dr. Sihler describes we had this non-pigmented variety first and then when the tumor took on active growth, the pigment developed. Now, this melanin is a normal product of the metabolism of the cells, and is usually formed by the chromatophores, which are of connective-tissue origin. They can produce pigment, but it is not as dark in color as the ordinary pigment known as "melanin." The latest edition of Delafield & Prudden draws attention to the fact that the melanotic pigment is darker in color than the pigment which is due to the destruction of the red cells, or is produced by the normal pigment cells of the skin. The pigmented tumors, such as Dr. Sihler describes, occur most frequently in the skin and in the choroid in the eye, and the point is made that the conditions are developed in these different sites on account of the characteristics of the cells from which they originate. That is, it is possible to say that a tumor which develops from a pigmented mole or nevus will have the same type of cell in the metastases, and the same applies to the choroid.

Not long ago I had a very interesting tumor which grew on the bridge of the nose of a patient who had been wearing eye-glasses for several years, and it produced a growth which he thought was a nevus. I do not know whether the doctor removed all of it, but he took off some of it, and the cells were pigmented. I thought I was justified in describing it as a melanotic tumor. These tumors will grow locally for some time without any symptoms, and then some irritation causes them to extend. The tumor may be small at the original site, but the metastases are large and frequent.

In looking over the specimens which Dr. Sihler sent in I noticed that the second specimen—that is, the material which was excised from the scar—was very dark in color. I did not see the tissue, but it is described as being very dark in color and covered with a fat-like exudate on the surface, but the diagnosis was that of carcinoma. Now, some of the points which other authors lay stress upon are, that in the early development of these tumors it is practically impossible to differentiate between carcinoma and sarcoma; that the cells are so young that they have not developed the processes which are characteristic of the sarcoma cell, and in this particular case the great interest is due to the rapid development of the secondary tumors, within a year or longer of the first operation. The glycosuria is quite an interesting point. I suppose nothing was thought about doing the phenolsulphonephthalein test to see whether the kidney function was lowered or normal.

The doctor spoke about the eye symptoms. Nothing was said in the autopsy reports as to whether there was anything in the orbit, but the doctor says the report came back negative—no change.

I brought a few specimens down, for I did not know that Dr. Sihler had such a very interesting specimen. I think this (exhibiting bottle) is probably some of the tissue which was sent in earlier from that case. It shows very nicely the pigment in the muscle. I also brought some slides, and shall be glad to show them if anyone cares to see what the tissue looks like.

Dr. V. J. LaRose (Bismarck): Mr. Chairman, Members of the Association: I wish to congratulate both Dr. Sihler and Dr. Long on the thorough study and working up of this case. It is the uncommon cases on which literature is scant that present so many difficulties in arriving at some definite diagnosis. They should be studied and reported, for, by so doing, others will be encouraged to make a more thorough study of similar cases and in publishing reports they will contribute valuable material to subjects upon which little has been written. One thing I should like to emphasize is the use of *x*-ray and radium treatment after excising enlarged glands where malignancy is suspected. In cases where such glands have been excised I would be in favor of leaving the wound wide open and giving intensive *x*-ray treatment.

I also wish to sound a note of warning against cutting operations in any suspicious skin growths, particularly in excising specimens for diagnosis. Moles and warts may be malignant, and as soon as they are excised the lymphatics are opened up and metastasis will take place. If a specimen is excised for diagnosis and malignancy is proven, a thorough radical operation should be performed immediately. If it is necessary to remove a superficial growth I am in favor of using the cautery or high-frequency spark to a degree of destruction. In larger growths where excision is necessary, *x*-ray or radium treatment should be used afterward.

Dr. L. H. Labbitt (Enderlin): I would like to say that I had occasion to observe a case of this kind in its terminal phases in a woman of about sixty who had pared her corns and had a little growth that was curetted for bone-infection, and she went on and developed growths in the groin and in the abdomen. The feature that struck me about the case was that she lived for a year, and her body was covered with growths as large as my fist. One growth in the breast broke down. The foot which gave rise to the condition had a very fetid odor, and nothing could be done to remove it. The growths were not uniform in size, but some of them were very large.

EMPYEMA, FOUNDED UPON SOME ARMY EXPERIENCES*

By Arthur T. Mann, M. D., F.A.C.S.
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MINNEAPOLIS

The virulent epidemic of streptococcic pneumonias which swept the camps in the spring of 1918, and the widespread epidemic of influenza which swept through the armies in this country and in Europe last fall have taught us some new things about empyema.

In the army hospitals where comparatively large numbers of empyemas could be given intensive study, it was soon found that early operation led to a high mortality. These patients, as a rule, were already so ill from the influenza and from an extreme toxic condition accompanying the pneumonia which preceded the empyema, that they were not able to withstand the shock of the operation and of the pneumothorax which accompanied the operation. An occasional patient collapsed and died on the operating-table, and a few never recovered from their condition of collapse after their return to the wards, but went on to a fatal issue. The pneumothorax was probably a more important factor in bringing about the fatal issue than the shock of the operation, for with it comes the sudden collapse of the lung, the displacement and the embarrassment of the heart, and the so-called "fluttering mediastinum," which now lies bulging into the space occupied by the other lung.

These experiences quickly led to aspiration in the early cases of empyema and to repeated aspirations as often as seemed necessary, until such a time as the patient was in a condition to undergo an operation with every reasonable chance of success.

With this change to aspiration in the early cases and a delayed operation, there was at once a drop in the mortality, more than could be accounted for by a decrease in the virulence of the infecting organism. In fact, it was noticed that some of the patients got well under the aspiration treatment though the majority of them still came to operation.

The amount of the re-accumulated fluid would determine the time of the next aspiration. The character of the fluid, the kind, and the number of the organisms found from time to time in the aspirated fluid, and the rapidity of its re-accumulation, would determine whether an operation would be needed.

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Our own feeling was that if fluid could be demonstrated by the *x*-ray it should be aspirated. We found that the *x*-ray would demonstrate fluid more surely than the physical signs, and that it took an accumulation of 200 c. c. or more to show in the *x*-ray plate.

On my service at the Base Hospital at Camp Dodge we undertook the problem of trying to sterilize the infected fluid accumulations and the forming pus at the time of the aspirations. This we did by injecting one to two ounces of an active antiseptic fluid at the end of each aspiration. We used three different preparations in this work: (1) Dakin's fluid, (2) dichloramin-T, and (3) the 2 per cent formalin glycerine preparation of Murphy. We soon felt that the best results were following the use of Dakin's fluid, and we discontinued the other two.

Dakin's fluid can be injected and left, or it can be injected and withdrawn two or three times or more until it returns fairly clear, and then a small final injection may be left in place. We felt that a few cases were cleared up in this way that would not have yielded to simple aspiration. And we felt that the process in other cases was rendered more mild when the patient finally did come to operation, and the recovery, in consequence, was more rapid.

Early aspiration serves another valuable purpose besides the removal of infected fluids from the cavities: it causes a re-expansion of the compressed lung before adhesions are formed so that, if later, with the formation of frank pus, adhesions form as they usually do, the lung becomes more or less adherent in an expanded condition. In this case the lung is less crippled, and the cavity is smaller and is much more likely to close completely after a primary operation. In this way will be avoided most of the severe extensive operations on the chest walls, the lung, or both, to obliterate large chest cavities which have refused to heal.

In selecting the proper time for operation, one must take into consideration the general toxic condition of the patient, and the state in which the pneumonia is found. As a rule, one should not do an open operation during the active stage of the pneumonia, but after the crisis is past and the affected areas are undergoing resolution. In this respect there is a marked difference between the pneumococcic empyemas following a lobar pneumonia and the streptococcic infections following the interstitial pneumonias or lobular pneumonias of the "flu" type. The pneumococcic empyema usually comes at a time when the lung is undergoing resolution, and operation is proper at an earlier time after frank pus is found than in the empyema of the streptococcic type. In the latter type the infection comes early while the pneumonia is active and extending into new areas and the patient is profoundly toxic. To operate early in these cases leads to the high mortality already spoken of.

We went through two or three phases in the operative work for these acute cases. At first we resected a rib in the usual way, but we soon found that this produced more shock or depression in the patients who were very ill with a pneumonia of the streptococcic type or of the "flu" type, than incision between the ribs, and that incision between the ribs will, as a rule, give ample space for drainage. So we abandoned rib resection except for the unusual case.

After watching the good effects of early aspiration in reducing the mortality in the cases which later came to operation, when the patient's condition had improved and the pus had become too thick to be withdrawn properly through the aspirating-needle, one was impelled to wonder whether the method of Mozingo would not be an improvement on the open method of operation, which provides for drainage of pus, but allows more or less collapse of the lung from the pneumothorax. Mozingo undertook to place a tube through a trocar and leave it in place when the trocar was withdrawn, making an air-tight contact, so that suction could be used, the pus withdrawn and a negative pressure maintained to keep the lung expanded. Thus the advantage is gained of having the lung expand during the time of healing, and of having a tube large enough to drain the cavity of its pus.

I have used the method at another hospital and am enthusiastic about it. Those who followed me at Camp Dodge used it, and they are enthusiastic about it.

As we have used it, the apparatus required is simple, a good-sized trocar, a Dakin's tube or a catheter which will fit smoothly into the canula, and a syringe of fair size—a 50 c. c. or 30 c. c., or even a 20 c. c., glass urethral syringe may be used. A local anesthetic is injected into the skin about one rib space below the one to be punctured, injected into the subcutaneous tissues, and then between the ribs at the level selected for the puncture. A small knife incision is made in the skin just sufficient to take the trocar, which is then inserted into it and pushed upwards, carrying the fold of skin with it until the level is reached for the puncture between the ribs.

The trocar is thrust through into the pus cavity and the clamped rubber tube is slipped through its canula with the least possible admission of air, until its inner end lies in the bottom of the cavity. The canula is withdrawn leaving the tube in place. The elasticity of the tissues is enough to bring them into air tight contact with the tube. The valve-like action of the fold of skin which has been pushed up by the trocar renders the final closure, when the cavity has become sterile, more easy. The tube may be held in place simply by tying two threads about it near the skin level and fastening them down with sterile adhesive plaster.

With the glass syringe thrust into the end of the tube, the clamp is removed and a syringe, full of pus withdrawn. The tube is again clamped, the syringe is emptied and the process is repeated until the cavity is well emptied. Great care is taken to clamp the tube each time before the syringe is removed in order to maintain the negative pressure. At the end of the operation, Dakin's fluid is used gently. With about 30 c. c. in the syringe a little is injected into the cavity and withdrawn. If no coughing ensues, more of it is injected and withdrawn. It comes back mixed with pus. This is repeated until it comes back fairly clear. Dakin's solution dissolves fibrin and helps to thin the pus as well as to sterilize it. Then the cavity is about half filled with Dakin's solution, which is allowed to remain from five to thirty minutes and then withdrawn. The tube is now clamped for three to ten hours, depending upon the condition of the patient and the rapidity with which the pus accumulates. Negative pressure can still be demonstrated sometimes twelve hours after the aspiration. When the pus on smears is free from micro-organisms the time of the aspirations is extended to twelve hours and after the irrigation 3 to 50 cc. of 2 per cent formalin in glycerine is injected and allowed to remain until the next treatment, when the process is repeated. The first injection of the formalin glycerine should be small as more may cause a distinct reaction, with a rise in temperature and at times a chill. The reaction to subsequent injections is very mild. We have modified the method in different cases.

When the cavity has been reduced to a small size and the discharge is sterile to cultures, the tube is withdrawn and the opening is allowed to heal. This time for withdrawing the tube will vary with different cases, sometimes in ten to fourteen days, and sometimes considerably longer. However, we feel that the process of healing is distinctly shortened and that the expanding lung is at all times placed at a distinct advantage. The method of treatment is simple. It does not require any special apparatus and in a large part the work may be performed by a suitably trained nurse.

Occasionally a patient will cough rather violently on the injection of Dakin's solution. This will mean that some opening into the lung or a bronchus has been established by the rupture of some small abscess. In these cases Dakin's solution is not used, or is used with caution. Suction alone may be used or a mild fluid like boracic solution or normal saline may be used in small amounts. In the rare cases in which the pus shows a hemorrhagic tendency, the Dakin's solution should not be used as a rule, or may be used with caution because in these cases the tendency seems to be slightly increased.

When the method of incision between the ribs, or if rib resection is used, instead of the trocar and tube, there is no good reason why the Dakin's solution should not be used also; and it is used in this way by a number of men. The work at the Rockefeller Institute showed that the cavity of an empyema may be rendered sterile at an early period by this means. A favorite French method is to introduce several Carrel tubes in various directions to the extremities of the cavity. Into these tubes are run silver wires as stillets to give them direction and to hold them in place. In this way, Dakin's solution may be sprayed into every part of the cavity.

In the early days of Dakin's fluid, I used to introduce a soft catheter through the regular drainage tube at the time of the dressing, in such a way that the tip would fall into the bottom of the cavity. The pus was then aspirated, Dakin's solution injected and withdrawn several times until it returned quite clear and a small amount injected and left in the cavity. In cases operated on in the old way, this method is of some value.

The underlying principles involved in the healing of a recent empyema are, first, the drainage of the pus, second, the sterilization of the cavity and, third, the expansion of the lung. It would seem that some modification of the method with the trocar, tube and Dakin's solution might serve these purposes best.

In the recent epidemic, the empyemas have by no means all been at the bottom of the chest cavity. The pneumococcus empyemas usually are at the bottom of the chest cavity and the

streptococcus empyemas often are, but the streptoccoccus cavities have a way of developing in unusual situations, sometimes between the lobes of the lung, sometimes between the anterior margin and the chest wall, sometimes high up beneath the scapular region or close to the spine, and sometimes there are more than one. Wherever they are they must be found and they must be drained and carefully treated.

As we approach the chronic type of cases, we find that very large cavities are usually the result of a mistake. Either they are neglected cases which have not been treated, or they are cases which have been opened too early before adhesions of the lung to the chest wall have formed and in which the lung has not been made to expand under negative pressure. Even these large cavities will in time diminish in size if properly treated with the Dakin's solution. Most of those which have had an open incision or a rib resection may be converted into more or less air-tight cavities by careful packing with narrow gauze about the drainage tube and may be given the benefit of negative pressure. The cicatricial contraction of the opening will gradually narrow it down until it fits closely about the tube.

Where a cavity has become stationary in size as shown by repeated *x*-ray pictures and has remained sterile for a long time, one may try for a closure of the sinus by removing the tube and discontinuing all treatment except the sterile external dressings.

When the cases have not healed and have become chronic, we have two broad classes to deal with, those with sinuses and those with cavities.

Sterile sinuses usually heal permanently when given the opportunity by ceasing all treatment except the external dressings.

Infected sinuses which, under careful treatment, refuse to become sterile are usually so branched and pocketed that the Dakin's solution cannot reach all their irregularities. These usually require a rather extensive operation. If there is a foreign body keeping the infection going, like a lost drainage tube or the fragment of a high explosive shell, this must be localized and removed. Then the sinus will usually close under treatment.

An established fistula into a bronchus is difficult to heal. Most of the sinus must be cut away so that its lining of epithelium and mucous membrane is removed. Sometimes the use of the electric cautery at the opening into the bronchus to destroy the epithelium will be of great service in aiding the cure.

The larger number of the chronic cavities demand one of the larger operations for their cure. I feel that no single type of operation will best meet all the conditions in these cases, but that one should study each case by itself and perform the operation best suited for each case, and modify the various steps of the operation selected to suit the conditions found during the course of the operation.

In the smaller cavities, wherever situated, an incision over the middle of the cavity with resection of enough of the ribs to gain access to the cavity, is as good a rule as any. Sometimes the cavity may be scraped and freshened with a curette, packed with gauze and subsequently treated by repacking, or by the use of Dakin's solution. Sometimes the smaller cavities will be treated by one of the more extensive procedures used in the larger cavities.

The larger cavities offer a serious surgical problem. Nature helps to diminish this space by a drawing in of the chest wall and closer approximation of the ribs, by a pulling up of the diaphragm often two inches or more and by a drawing in of the mediastinum toward the affected side, but still a cavity persists often of two or three hundred cubic centimeters in size and sometimes more.

Sometimes these cavities may be treated in the manner described above for the smaller cavities, by freshening all the surfaces and by packing with gauze, or with the use of Dakin's fluid. Sometimes the thick growth of scar tissue will need to be pulled off from the lung surface and the adhesions of the lung about the margins of the cavity loosened to allow the lung to expand, as it surely will if this is done. It is sometimes well, too, to peel the membrane off from that part of the chest wall and off the diaphragm lying in the cavity as was done in the old Fowler operation, though this will not often be necessary, especially if the cavity can be rendered sterile by the Carrel method.

The French method or the method of Tuffier is to place seven or eight Carrel tubes, stiffened with silver wires, into every part of the cavity. Frequent instillations of Dakin's solution are used until only one germ is found in the smears in four microscopic fields. Then the false membranes forming a shell over the lung and its sheet of pleura is shelled off and the lung expands. Tuffier reported forty-seven cases in-

cluding three war wound cases which he treated in this way. All the patients were cured.

For large cavities, I think the best incision in the chest wall often is a long incision between two ribs reaching well back toward the articular process of the rib and well forward. The ribs may be widely separated by a rib spreader or an abdominal retractor used as a rib spreader. This will give free access to the chest cavity and is an incision similar to the one used in the war zone when searching for foreign bodies imbedded in the lung. The sheet of thick membrane over the pleura of the lung will often peel off with surprising ease. It is often best started by making an incision across its middle until a thin blue line appears and begins to widen out and possibly another at right angles to it. Then with the handle of the knife and a little finger motion, the separation will often be accomplished easily and readily. The ribs may now be brought together and the whole wound sutured as suggested by Lillenthal, leaving a small wick at the angle at either end for forty-eight hours as a drain for the serum, at the end of which time they may be removed.

Emil Beck has suggested that a skin flap with a rather broad base be turned into some of the old, tough, chronic cavities after the walls have been freshened, and packed into the bottom firmly with gauze for forty-eight hours or more, when it will be found to have become adherent. Epithelium spreads from the skin margin to cover the walls and the retraction of the skin and scar finally draws the depths of the cavity much nearer the body surface. I have seen a number of his cases. They show very interesting results and in certain types of cases I shall be anxious to try the method, though the healing process naturally takes considerable time.

DISCUSSION

Dr. T. F. Riggs (Pierre): I am sure that the members of this Association deeply appreciate the opportunity they have had in hearing this paper by Dr. Mann. We all know about Dr. Mann's work; we all know his writings, and we all agree that this paper has been written in his usual clear and concise style and that it is most instructive.

While it is difficult for me to discuss the paper, yet I have appreciated a number of points he made. In the first place, his differentiation between streptococcic and staphylococcic infections and pneumococcic infections, the character of the pus, the location of the empyema, and the kind of operation done in these cases, are very clear, and I have been much interested in listening to his description of the treatment of various empyemas.

There is no question but that we learned a number of things about the treatment of empyema during the recent influenza epidemic. Aspiration, which used to be a diagnostic measure, has recently been used as a therapeutic measure. The use of the trocar with a tube, I believe, is a great advance, for we know a number of cases have been cured without a thoracotomy.

Given a patient with empyema and an active pneumonia or a patient whose empyema has not been recognized, and you have a patient in a very critical condition. We know that if we draw off fluid or pus through an aspirating-needle the patient is relieved temporarily. We find that if we use a rubber tube through a trocar in the way Dr. Mann has described we can repeatedly draw off pus with a notable improvement in the patient's condition. Sterilization of the cavity, together with the negative pressure, brings the lung down to practically a normal position, giving adhesions between the lung and parietal pleura which keep the lung down where it belongs, and give us a good recovery. We have found in our exceedingly limited experience that in the old cases where empyema had not been recognized, and, I think, also in cases in which the empyema was due to pneumococcic infection, we could not get the results by the use of a very small tube which we could get with a large tube; therefore we made it a point to use the trocar and a large tube. I really think it is a good thing because in several of the old cases we found the fibrin chunks would obstruct the tube, but by means of Dakin's solution, with repeated washing and continued negative pressure, we were able to get the chunks through. I did a thoracotomy in one such old case, and then went sometime without doing another. I found another case where it seemed impossible to drain the cavity properly by the use of a tube because of the large amount of secretion. In that case I did a thoracotomy. We had such remarkably good results with the negative pressure and the use of the tube that I do not think I shall ever go back to the old treatment without first trying the tube-drainage, especially when the patient is in a very bad condition. If you have not tried it you should do so by all means.

In one of our cases the patient two years before had a thoracotomy near the posterior axilary line. She had been repeatedly opened, and the cavity had twice been filled with Beck's paste. When she came to us we found that the sinuses had healed and that she had a typical empyema. The first time she came in I simply opened the old sinus, and let the pus out. Healing occurred again, and I used the tube method with the negative pressure, and this patient has now gone between three and four months without a recurrence of the fluid. Whether it will be necessary to go in again and follow the method Dr. Mann has described of peeling off the firm exudate or using Beck's paste method or the skin ingraft, I do not know.

I am sure that we owe a vote of thanks to Dr. Mann for his splendid paper, and whether we give it in a rising vote or mentally, we thank him for his contribution.

Dr. E. O. Giere (Watertown): I was very much interested in Dr. Mann's paper. I have read a good deal about this new way of treating cases of empyema, but I have not had the courage to practice it.

The modern manner of treating abscess cavities has been to make a free opening to encourage the drainage of pus. This is exactly in line with what we heard from the otologists this morning, that they no longer

simply puncture the ear drum, but make a semilunar incision. As I understand it, this new method of draining empyema works on a different principle from the old, for, while the old method depends entirely on drainage, the new method depends principally upon the dissolving and disinfecting properties of the solution. I have depended entirely on free and thorough drainage, and for that reason I have not had the courage simply to open between the ribs in the treatment of empyema.

We have had some of these empyema cases following influenza this year, quite a few of them, the ages of the patients varying all the way from a little over a year up to eleven years. These cases have all been very bad. We have used ether anesthesia in all of them, resected a part of a rib to establish drainage, and everyone recovered. A great deal of pus and cheesy material have gushed out at the time of operation, and a great deal more has continued to drain for ten to twenty-one days. I should hesitate in using the trocar and cannula or the catheter method of drainage as I would fear that the chunks of cheesy and fibrinous material found in these cases could not be disposed of. I ask Dr. Mann to explain this in closing. Does the Dakin solution dissolve these chunks of cheesy material, cause them to disintegrate, and as thin pus escape through the catheter, or are they absorbed, or do they become organized and remain? Repeated aspiration in a child never appealed to me as being a very practical method of treating these cases, as one experience of this kind will generally put the child in a mood to fight against any more operative procedure.

If this new treatment of empyema does all that is claimed for it, it is certainly an improvement over the old thoracotomy treatment, in that it makes less of an operation, and is therefor safer, and perhaps results in a more complete cure.

Dr. W. H. Sherwood (Doland): One of the greatest advantages of Dr. Mann's method is its value to the general practitioner. As he describes the operation, it does not take an expert surgeon to do it. Those of us who practice in the smaller towns far removed from the surgeon, are sometimes up against it when we are confronted with these cases. In a number of cases I have used a treatment similar to that described by Dr. Mann. I have also seen marked results from Dakin's solution within two or three days. One great advantage in this procedure is, that it requires only local anesthesia.

Some four or five years ago I came in contact with a case of empyema following pneumonia in the midst of typhoid fever. It was a consultation case, and I found the patient with a very large abscess and in a very bad condition. The heart was bad, and pressure from the abscess was causing much difficulty in breathing. He was in his sixth week of typhoid. It was, I think, a right-sided empyema, and it seemed that the patient would die if relief was not obtained soon.

I inserted a large trocar under local anesthesia and drew off nearly a gallon of pus. I had only a small catheter with me so inserted that and left it. It was necessary later to put in a larger one. With this line of treatment the patient made a good recovery. So I think we can profit by this excellent paper the doctor has given us and can do a great deal of good for our patients by performing this operation as he has directed.

Dr. Mann (closing the discussion): I am very much obliged to the members for their generous remarks in discussing my paper. I have been much interested in what was said about subphrenic abscess. I had an experience myself twice with subphrenic abscess. I had what was supposed to be a case of empyema. This was years ago, and the medical man had drawn off pus. There was no question about that. He saw it and described it carefully, and I did an old-fashioned resection of the ribs for empyema and got serum. That only meant one thing, that his needle had gone into the chest cavity and into an abscess somewhere else. So I sewed the diaphragm to the opening in the chest wall and made a hole through the diaphragm and found a subphrenic abscess, which was the reverse of what the doctor who has just spoken had. It is not uncommon to have a certain amount of serous fluid in the chest cavity when you have a subphrenic abscess. The abscess in my case had nothing to do with any chest condition at all. There was a discharge of fluid above because the inflammation was near the diaphragm.

In regard to these fibrinous masses, and so on, and whether Dakin's solution absorbs the fibrin or dissolves it: I do not know whether it will altogether dissolve these fibrinous masses we have had experience with or not; but we have not had to open any case with fibrinous masses at the camp which had been treated by Dakin's solution. At the Rockefeller Institute, where they have worked out the Carrel-Dakin fluid method, they had certain objections to using it in the chest cavity because it dissolved the fibrin and loosened up the lung. This would allow it to retract unless negative pressure was added. I think that partially answers your question. If there are fibrinous masses we do not hesitate to use Dakin's fluid because it will dissolve most of these masses.

As to local anesthesia: When these patients have an active pneumonia, are you going to give them ether? I think not. It is better to inject the local anesthetic agent under the skin, and make an incision between the ribs. If you open in the usual place there is plenty of space between the ribs. If you do a rib dissection, you must be careful about the anesthesia of the periosteum. If you resect a rib stick the needle in before you cut down through the periosteum; stick the needle between the periosteum and the rib and put in some of the anesthetic there. Then you can strip it off without pain. Local anesthesia is the thing to use if you are going to do resection of the ribs. I think a point that we should try to avoid is operating until the process in the lung is on the road to improvement. This is a great step in advance, and it is one of the greatest objections to following the trocar with an operation right away.

As to finding two or three pints of pus: While this may be true of those cases which you see in the country, it is not so in those cases we have seen at the camp. In the country you do not see them early enough. At the camps it would be impossible to let these cases go on until we have two or three pints of pus or fluid accumulate in the chest. In our camp experience we have not had these large masses of fibrin that you speak of. We have had some but not the big ones. There is a difference in the time you get patients in the country and the time we see them at the camp. Some of your patients are away out in the country; you cannot use negative pressure for four or five or six hours, but you can employ such a method as Senn employed, with a tube fastened on to another tube reaching into a bottle

and going into the fluid, or have the bottle fastened to the side, with two openings and thread this one, the discharge from the drainage tube going into one of them and threading the other one on a rubber bulb, and every once in a while you can make a few squeezes and can use the Dakin solution when you get around to it.

A MEMBER: Is this method practicable in children?

DR. MANN: I do not know. But we do know that children will stand more than adults up to a certain point if we handle them properly. With children I think it could be managed. Anyhow, during the active stage of pneumonia in a child you would not operate, and if you want to do something you would put a tube through the trocar early and not resect a rib. I think that is as near as I can answer that question.

DR. E. O. GIERE (Watertown): A child, four years of age, was brought to Watertown from a distance of fifty miles. The child had pneumonia four weeks ago and was treated by the family doctor. The people were poor and the doctor was discouraged from calling as often as he should have done, and finally they told him that they would call him when he was needed. The doctor was called one night some time after this and found a large solidified condition of the right lung, and the child in very desperate condition. The next morning he brought the child to our hospital. *X*-ray examination showed one pleural cavity full of fluid, and the child was panting for air. We made a resection of the rib within a few hours after the child arrived and I should estimate that at least three pints of fluid escaped from the pleural cavity and following this, large chunks of cheesy material were scooped out. In a case of this kind can we expect the Carrel-Dakin solution to dissolve all this and bring about a perfect recovery?

MINNESOTA PROGRAM AGAINST INFLUENZA*

BY CHARLES E. SMITH, JR., M. D.
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ST. PAUL

FOREWORD

The lack of a definite plan for the control of influenza handicapped workers somewhat last fall in their efforts. With a view towards preparedness against the possible emergency of the return of this disease, the Minnesota State Board of Health has approved and publishes the following as its program for the ensuing year. No claim is made for originality, the program being built along certain lines suggested by the United States Public Health Service and by a Committee from the Conference of State and Provincial Health Officers of North America. Experience in Minnesota during the past year and the advice of authorities throughout the country have been used as the basis for this plan.

INTRODUCTORY STATEMENT

The 1918 epidemic of influenza showed that the disease was one of extreme communicability. It is limited to human beings. It is doubtless due to a micro-organism which has not yet been identified. A mental condition will not cause the disease in itself but does increase the suffering of one who has contracted influenza or who believes that he has. It is assumed that the disease prevalent is identical with the one heretofore known as influenza, although this statement has not been proven.

For diagnosis, laboratory methods offer very little assistance. Length of infectivity cannot be determined by laboratory methods. Such methods, however, are highly advised for purposes of discovery of information connected with the etiology and epidemiology of the disease. Pneumonia, due to invasion of pulmonary tissue by the streptococcus or pneumococcus, is probably secondary to the initial attack of influenza and responsible for the deaths which occur.

Evidence is conclusive that the causative agent of the disease is given off from the nose and mouth of infected persons and gains entrance through the nose and mouth of the person who contracts the disease. Contact may be direct or indirect. There is no other way in which the disease is transmitted.

PREVENTION

Prevention of the spread of this disease must be accomplished by prevention of the secretions from the nose and mouth of the infected person reaching any other person. The following ways are suggested:

I. *Break the channel of communication* by which the infective agent passes from one individual to another.

a. It is extremely important to prevent droplet infection.

b. It is important to prevent contamination by sputum on the hands and eating or drinking utensils.

c. There is a slight danger that food and drink may carry contamination by the secretions.

*Prepared, approved by the Board, and submitted for publication September 30, 1919.

Preparation of food and drink should be supervised.

II. *Render person exposed to infection immune* or more resistant by the use of vaccines. It is supposed that vaccines prevent or mitigate influenza itself, or that they prevent or mitigate complications recognized as due to influenza or to streptococci and pneumococci. Evidence as to the success or uselessness of vaccines is contradictory and irreconcilable. This Board neither recommends nor discourages their use. It desires further information. It firmly states that physicians and health officers should promise nothing from vaccination and believes that the public will be satisfied with the statement that "Vaccines may or may not be of service. Their use is neither recommended nor discouraged; the question is left to the individual physician and his patient."

III. *Increase the natural resistance* of persons exposed to the disease by augmented healthfulness. Physical and nervous exhaustion should be avoided by paying due regard to rest, exercise, physical and mental labor and hours of sleep. Apprehension and worry should be discouraged. Youth and bodily vigor do not guarantee immunity.

IV. *Other Preventive Measures.* The character of the community determines entirely the preventive measures practicable. The same measures cannot be applied to small rural communities that should be applied to large cities. The local health officer should take such additional stops as he believes necessary for the control of disease in his community.

a. Authority in health matters should be centralized.

b. Methods of securing reports of the situation should be at hand. (Note influenza is a reportable disease in Minnesota.)

c. Education: Publicity with respect to respiratory hygiene should be widespread. The dangers from coughing and sneezing should be discussed and the dangers from nasal discharges should be emphasized. The necessity of keeping the fingers out of the nose and mouth should be dwelt on. Necessity for extreme caution in the way of transfer of secretions should be considered, particularly with regard to carriers. Hand washing before eating should be encouraged. The gospel of fresh air and general hygiene should be preached. Dangers from common colds should be borne in mind.

d. Administration:

1. Abolish the *common drinking cup* and enforce proper washing of glasses at soda fountains and other public drinking places.

2. *Proper ventilation* should be enforced.

3. *Nonessential gatherings are prohibited.* Gatherings from which certain numbers of people earn their livelihood should be controlled as to size and frequency recognizing the danger of the transmission of discharges of the upper respiratory tract from one person to another. Where the necessary activities of the population, such as the performance of daily work and earning of a living, compel contact, very little is gained by closing certain types of meeting places. If, on the other hand, the community can function without much contact between individual members thereof, much is gained. *The closing of meeting places* other than nonessential gatherings is effective in the control of influenza in inverse ratio to the size of the population of the community in which said closure is enforced. *Closure of schools* is not recommended as a routine policy for any epidemic disease. The children should be kept under observation and those excluded who show symptoms of disturbance of the upper respiratory tract. There should be an adequate system of inspection in the schools. If through sickness or fear the limited attendance at school makes necessary the closure thereof to prevent the drag on routine school work of the children returning later, then schools should not be reopened unless there is sufficient nursing or medical help to examine all children at reassembly and exclude those suffering from respiratory symptoms. *Church services* should continue but be reduced to the lowest number consistent with adequate discharge of necessary religious functions and should be conducted in such a way that the intimacy and frequency of personal contact during the service is reduced to a minimum. It is granted that *theaters and movies* open may be used for certain educational benefits but attention is also directed to the fact that their closure has certain educational value. Exclusion of a dangerous cougher from such an assembly must be rigid but it must be borne in mind that the damage is done when he coughs. The efficiency of sanitation and ventilation should be made the basis on which theaters and movies are closed, if such closure becomes necessary, and those having the least efficient systems should be closed first. *Dance halls and billiard parlors* should be closed. *Street cars* should be adequately ventilated, overcrowding should be discouraged, walk-

ing to work should be encouraged. Staggering of opening hours should be encouraged. *Public funerals are prohibited* for contagious deaths and no such funeral service may be held from the church. All funerals during epidemics must be private and attendance limited, as they are unnecessary assemblies in limited quarters increasing contacts and multiplying sources of infection. The funeral cortege is limited to the fewest number of conveyances possible.

4. *Face masks* should be worn by all in attendance upon the sick or in the household with the sick and by those the nature of whose duties brings them in close relationship with the exhalations of other people, such may be barbers, dentists, clerks in stores, etc. Marked educational advantage is derived from the use of masks in assemblies.

5. *Early isolation of patients* suffering from influenza or pneumonia is necessary, the house should be placarded and the place quarantined.

6. When epidemics are widespread ease in rendering adequate medical attention is gained by *hospitalization* of all patients. Large wards are discouraged. Where home facilities permit and there is no danger of overtaxing the already overworked medical professison, home treatment should be advised. Laws regarding sneezing and coughing should be enacted and enforced for educational results.

7. *Terminal fumigation* is not necessary. Cleaning, sunning and airing the former sick room are necessary.

8. *Alcohol* has no preventive benefits.

9. The use of sprays, gargles, etc., is not encouraged except for general principles of cleanliness.

MISCELLANEOUS CONSIDERATIONS

1. Colleges, boarding schools, asylums and similar establishments will find it advantageous to enforce quarantine against the outer world. If such institutions be closed, however, pupils must stay at the schools to prevent scattering of foci of infection throughout the state and other states. (See regulation.)

2. Where is becomes necessary to transfer patients ill with influenza from one sanitary district to another it can only be done with the consent of the health officer of the district left and the district to which the patient is going. It is further required that such transfer be made without expense to the community in which the patients will arrive and that the transfer must be made in such a way that no one enroute is exposed to the danger of infection. (See regulation.)

3. Measures of control should be directed first to the prevention of the disease and second to distributing the epidemic over such a period of time that its burden is not excessive at any one moment. Statistics and records should be carefully kept and are recognized as of exceeding importance. The data should be collected in a uniform manner, covering carefully the facts asked for by the Minnesota State Board of Health. The encouragement of respiratory hygiene begun now should have certain influence in the control of influenza, such as the lessening of its morbidity and mortality rates, the prevention of pneumonia both complicating influenza and in general throughout the state, and possibly widespread benefit in the elimination of all diseases of the upper respiratory tract in the future.

RECAPITULATION

1. Dissemination of educational literature and instructions.

2. Reporting, Isolation, Quarantine, Attention to Regulations, Centralization of Control.

3. Local additional control, as occasion warrants.

4. List of available nurses on file with State Board of Health. Their services are available to a community needing them. The expense to be borne by the community.

5. Listing of available doctors for emergency work, such doctors to be furnished by the United States Public Health Service at a salary of $200 per month, $4 a day for expenses and railroad fares. Communicate with the State Board of Health for particulars.

6. Co-operation with other agencies in their programs in regard to influenza.

THE
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THE MINNESOTA STATE MEDICAL ASSOCIATION

The fifty-first annual meeting of the Minnesota State Medical Association was held in Minneapolis on the first, second, and third of October. The registration of attendance reached about 420, a larger number than has been registered for a number of years, showing, evidently, that the program was very attractive, or perhaps showing that the visitors from away appreciated the clinical facilities which are offered in Minneapolis, and expected a repetition of the recent Minneapolis medical and surgical clinic. However, the Association confined itself more particularly to its program, and anyone who looks it over will see that it was very carefully made up by the chairman of the Section on Medicine and the chairman of the Section on Surgery.

The state was represented on the program as follows: Minneapolis had seventeen papers; Rochester, eight; St. Paul, four; and Duluth, three. There were no papers from any other section of the state.

The discussion of papers was as thorough as possible, and, fortunately, all of the discussions were taken down by the official stenographer of the A. M. A., Mr. Wm. Whitford.

The joint session was welcomed by the president, Dr. George D. Head, in the absence of the mayor of the city. Immediately after the joint session, the Section on Surgery continued its meeting in the Gold Room of the Radisson, and the Section on Medicine began its meeting in the Hennepin County Medical Society rooms. Naturally, the surgical Section was better attended than the medical Section, although both had good representation.

The subjects under discussion were all live topics. Although it was perhaps a little late for the cure of hay-fever and asthma, it is well that this subject was brought to the attention of the Association in order that the members may prepare for their patients next year.

The paper on "Auricular Fibrillation and Life Expectancy," by Dr. F. A. Willius, of Rochester, and the paper on "Tuberculosis of the Thyroid," by Dr. W. A. Plummer, also of Rochester, were on equally vital topics.

The paper on "Vertigo: The Determination of Its Cause," by Dr. J. A. Watson, of Minneapolis, was a very scholarly effort. The discussion pertaining to the tracts both of the nervous system and the arterial system to the vestibular canals showed that the subject is a very important one for consideration on account of the numerous cases of vertigo, as well as the few possible causes of the disorder.

Dr. H. L. Staples, of Minneapolis, in his inimitable manner, read a paper on "Observations on Angina Pectoris," in which he referred to the earlier writers and the more important causes, syphilis being of paramount importance. This was probably more or less new to many of his hearers, and again opened new pathways for investigation. Had it not been for Dr. Staples' confident and humorous presentation of the subject, most of the doctors would have gone away dreading this disease exceedingly. But when they heard that numerous medical men have had angina pectoris for twenty years or more, and particularly when they know the possible foundation for it, they went home refreshed in mind.

"Blood Transfusion: Methods and Indications with Special Reference to Its Sustaining Value in Pernicious Anemia," was the subject presented by Dr. F. H. K. Schaaf, of Minneapolis.

"The Colloidal Gold and Other Cerebrospinal Fluid Reactions" was discussed by Dr. Charles E. Nixon and Dr. Margaret Warwick, both of Minneapolis, who again call the attention of medical men and surgeons to the necessity of making full and careful examinations in every possible way.

During all the time that the medical men were discussing these things, the surgeons were holding forth, particularly Dr. A. C. Strachauer, of Minneapolis, and Dr. F. M. Manson, of Roches-

ter, on operations for empyema, each presenting a different point of view.

Then Dr. A. T. Mann, of Minneapolis, demonstrated "The Use of the Carpenter's Mallet in Severe Cases of Pott's Fracture and Some Other Complications in Fractures." It would be perfectly proper at this time to say that Dr. Mann was out with his hammer, but for a good purpose.

"War Wounds of Major Joints," by Dr. A. A. Law, of Minneapolis, called out a discussion by many men who had been overseas and were able to discuss the situation interestingly.

"Treatment of Tuberculosis of the Spine," by Dr. H. W. Meyerding, of Rochester, a particularly interesting subject, elicited its quota of discussion.

"Tumors of the Great Omentum," by Dr. A. L. McDonald, of Duluth; "Carcinoma of the Thyroid," by Dr. H. A. Bouman, of Minneapolis; "Results in Cholecystectomy," by Dr. W. A. Dennis, of St. Paul; "Prolapse of the Uterus," by Dr. W. A. Coventry, of Duluth; and "Rational Treatment of Carcinoma of the Uterus," by Dr. J. Warren Little, of Minneapolis, held the interest of the surgeons.

On the third day the surgeons discussed Nerve Surgery from the standpoint of diagnosis, by Dr. A. S. Hamilton, of Minneapolis; and from the standpoint of treatment, by Dr. J. F. Corbett, of Minneapolis.

Dr. A. W. Adson, of Rochester, read a very interesting paper on "Surgical Treatment of Tri-Facial Neuralgia," opening up a new and speedy method for the relief of this painful disorder. His success is one which will stimulate other surgeons to follow in his footsteps.

"Paralysis of the Abducens Nerve Secondary to Mastoiditis," by Dr. George C. Dittman, of St. Paul; and "The Correction of External Deformities of the Nose," by Dr. J. D. Lewis, of Minneapolis, closed the surgical program for Friday morning.

Friday afternoon "Recent Methods in Diagnosing Surgical Diseases of the Urinary Tract," by Dr. Wm. F. Braasch, of Rochester, and "Röntgenology of the Urinary Tract," by Dr. Frank S. Bissell, of Minneapolis, were discussed together.

"Diagnosis and Treatment from a Medical Viewpoint," by Dr. L. M. Rowntree, who had previously read a paper on "Diabetes Insipidus," covered a wide range of diagnostic possibilities, and he was followed by Dr. E. Starr Judd, of Rochester, on the surgical side. These two papers opened up a tremendous outpost for investigation, and both papers showed the necessity of careful analyses, and the necessity of proper equipment and diagnostic acumen.

In the medical program, further, the following papers were read: "Methods of Handling Dermatological and Luetic Cases in the Dispensary," by Dr. John Butler, Dr. H. G. Irvine, and Dr. S. E. Sweitzer, all of Minneapolis. "Clinical Aspects of Hypertension," by Dr. E. J. Hirschbeck, of Duluth, discussed by Dr. J. P. Schneider, of Minneapolis, was a subject of great interest even though the technical side of it was not always easy to follow. It was ably treated by both men, and was extremely enlightening. "Neurology and Psychiatry in the War," a paper read by Dr. C. R. Ball, of St. Paul, was interesting, particularly to the men who had been abroad and were interested in nervous and mental diseases, to the men at home who were in army service, and to the men who saw the reconstruction efforts. It was a review of what has taken place in the neurologic and psychiatric field of war.

On the evening of October second the usual banquet took place in the Gold Room of the Radisson, which was filled to its capacity. After dinner was served, President Marion L. Burton, of the University of Minnesota, talked to the medical men relative to medicine, morals, and the necessity of establishing integrity in all classes of students in all departments of the University. Dr. Burton's address was given in his characteristic vein of forcefulness, earnestness, and appeal, and established him firmly in the hearts of his audience.

The principal address of the evening was given by Dr. W. W. Herrick, Associate Professor of Medicine at Columbia University, on "Meningococcus Infection, Including Cerebrospinal Fever." Dr. Herrick is a quiet, earnest speaker, very deliberate in his manner, but very clear and informing in his statements. He told how, during his service in the army, particularly at Camp Jackson, South Carolina, the possibilities of tests in acute cases could show that a probable meningitis was on the way. And he proved by his statistics that it was possible in some 20 to 45 per cent of the cases that a premeningitic diagnosis could be made, and that the mortality-rate was materially reduced where an early diagnosis was made and the antimeningitic serum was used, both intravenously and intraspinously. This re-

duction of the mortality-rate continued until the quartermaster's department failed to keep up its equipment, which included warm tents, quarters, and clothing. When this occurred, and the sick men were not cared for in the proper way, the mortality-rate again increased to an alarming degree.

During the time that the doctors' banquet was in progress, the Woman's Auxiliary of the Hennepin County Medical Society was entertaining the visiting women at a dinner, and during the day an automobile tour was part of the program.

On Friday afternoon Dr. George D. Head, President of the Association, gave his address, which was a scholarly paper, and dealt largely with the reconstruction in medical education. Dr. Head did not mince matters in the least, and he criticized the present methods in a very clear, as well as in a very impressive, manner. His criticisms were aimed at the present methods of medical education, and as soon as his paper appears it should be carefully read by every medical man in the state. He paid due honor to the men who were in the service, to those who had lost their lives, and to the men in active work, both in medicine and in surgery.

The House of Delegates at its first meeting Wednesday afternoon revoked the charter of the Brown-Redwood County Society for its failure to try Dr. L. A. Fritsche within the 90 days allotted for this purpose, at the last annual meeting, as well as for the failure to present evidence of his guilt. This will probably lead to the formation of a new society in that district under a new name and a new charter.

The report of the chairman of the Publication Committee on the state journal led to much argument on account of the seeming misleading differences between this report and the report of the treasurer. It was finally ordered that both reports must cover the same period. As matters now stand no one but two or three men knows anything about the finances of the organization, and it is quite evident that the delegates considered the business side of the Association in need of reorganization.

The names of the officers elected appear on another page.

The program would have been printed in the October first issue of THE JOURNAL-LANCET had it been sent over by the Committee, but there was some delay in the preparation so that it came into the hands of the printer too late.

A NEW METHOD OF REFORMING CRIMINALS

A rather unscientific account of the action of the grand jury in Chicago, in September, tells of a new plan to reform criminals. It is an effort to do away with the vainglorious vanity of the criminals who sometimes desire to pose as martyrs, at least in their own eyes. It suggests that, like obstreperous, wilful children, physical punishment begets only resentment. It also calls attention to the fact that many of the minor crimes, like burglary and larceny, are committed by offenders who are unbelievably stupid, but few of them seem to have been physical cowards. And they further make the astounding comment, which has been known to medical men for a long time, that the average criminal has a low grade of intelligence.

The remedy the grand jury suggests is to make the criminal supremely foolish by deriding him, laughing at him, and pointing out his childish traits. The jury tells of a man who stole Liberty bonds to the extent of five hundred fifty dollars, saved the interest coupons (worth less than a dollar each), and bought a piano with the bonds, had it delivered to his room at a boarding house, and then realized that he could not play.

Some other simple-minded man broke into a bird-store and stole parrots. The mere fact that he stole them from the immediate neighborhood showed a low grade of intelligence. He also robbed a fruit-store, succeeding in stealing three bunches of bananas. He hid them in his clothes-closet in his room at the boarding house. Very naturally, the decaying fruit gave him away. This man, of course, was a common, everyday defective man, with intelligence probably below that of the average child. Whether he was cured or convinced of his foolishness by ridicule is a question that must be answered later.

Many other minor criminals did foolish things, and their detection was almost immediate. No man with a mind above that of a child would have attempted such larcenies or burglaries. Of course, these cases are every-day affairs, and any of our courts will sustain the physician when he says these people are below grade mentally and physically. Most of them should have been spanked, and some of them were, much to their chagrin and to the amusement of their fellow prisoners.

Among the recommendations made by this grand jury was that of purchasing a thousand talking-machine records, each record of from

five hundred to a thousand words, and inscribed in considerable detail with the humorous stupidity of these petty offenders. It further suggested that, if a machine were placed on each floor of the county jail, station houses, or reformatory, and each machine started at breakfast time and kept going a number of hours each day, few criminals would care to come back to such an abode. Of course, it says nothing about the effect of such records upon the caretakers. It would almost seem that some caretaker would commit murder after listening to this repetition of foolish verbosities. At least, if he did not commit murder he might in all probability smash the talking-machine and all the records.

The only refreshing part of the work of this particular grand jury is, that they have finally come to realize that many criminals, and petty criminals particularly, belong to the feeble-minded classes. And what they need, instead of ridicule of this cheap type, is education, such as is carried on at these various penal institutions.

THE COST OF THE ABUSE OF POWER

The world rings today, as never before in its history, with anathema against the abuse of power; and, in our opinion, it is abuse of power that has led to the condition truthfully set forth in an editorial in the *Journal of the Missouri State Medical Association* and reproduced, with proper credit, as an editorial in the *Wisconsin Medical Journal,* which papers are the official organs, respectively, of the medical associations of the states named.

We do not assert, nor do we believe, that the scientific men on the Council are amenable to improper influence, but we do assert that the Council cannot be an "unloved child of the entire family,"—and it is so denominated by friends,—without some cause other than the caprice of its parents.

This is what the editors from Missouri and Wisconsin say:

> The Council on Pharmacy and Chemistry of the American Medical Association is a department of our national organization that has not received the plaudits and encomiums of a wildly joyous medical profession nor the grateful praises of the enthusiastic manufacturer of pharmaceuticals. The Council seems indeed to be the unloved child of the entire family of subsidiary [*sic*] bodies of the association.

REPORTS OF SOCIETIES

ANNUAL MEETING OF THE MINNESOTA STATE MEDICAL ASSOCIATION

The fifty-first annual meeting of the Association was held at the Radisson Hotel, Minneapolis, October 1, 2, and 3, under the presidency of Dr. George Douglas Head, of Minneapolis.

The House of Delegates met in the Library Room of the Hennepin County Medical Society. The regular routine reports of the secretary and treasurer, as well as reports of committees, were presented and acted on. The secretary's report showed that the Association has a membership of 1,534.

The House of Delegates revoked the charter of the Brown-Redwood County Medical Society for not bringing to trial Dr. A. L. Fritsche, of New Ulm, declared guilty of disloyalty on evidence submitted to the Public Safety Commission. This does not debar the other members of the society from applying for a new charter and of becoming again members of the State Association.

Relative to matters of legislation, it is not likely that any medical legislation will be attempted this year, as it is thought the public should be as responsible for legislation protecting the health of the public as the physicians themselves, and the medical profession should not be expected to assume the whole responsibility

The Committee on Insurance, through its chairman, Dr. J. W. Andrews, reported progress.

Dr. W. L. Beebe, St. Cloud, presented the report of the National Legislative Council in which he drew attention to the fifteenth annual conference of the Council on Medical Education and Licensure of the American Medical Association. Reference was made to hospital standardization as playing an important rôle in all medical organizations within the last few years. The majority of American hospitals have been impressed with the fact that there should be a standardization, and the time is not far in the future when hospitals will be compelled to exclude from their operating-rooms men who call themselves surgeons, and are not possessed with the requisite amount of knowledge to know when not to operate—men who have neither the knowledge of anatomy nor the skill to perform the simplest

operations. He mentioned a small town of his acquaintance in which there are fourteen men licensed by the State of Minnesota to practice medicine. Twelve of the fourteen are posing as surgeons and attempting major operations, but only three are competent to do these operations. He expressed the hope the day would come when the incompetents were prevented from attempting surgery, and when they are brought before the courts for criminal practice.

Communications were presented from the American Society for the Control of Cancer, asking for co-operation for a standing committee or commission for the study and control of cancer, such a committee to be appointed by the State Association, with a carefully selected and continuing membership rather than with annual rotation.

One very pleasant and entertaining feature of the meeting was the banquet, at which addresses were made by President Marion L. Burton of the University of Minnesota, and by Professor W. W. Herrick, Associate Professor of Medicine, Columbia University.

President Burton spoke eloquently on medical education, and Dr. Herrick gave an illustrated talk on meningococcus infection, including cerebrospinal fever.

The scientific work of the Association was divided into two sections. The papers presented were of a high order and were freely discussed.

The following officers were elected: President, Dr. J. H. Adair, Owatonna; first vice-president, Dr. E. M. Clay, Renville; second vice-president, C. E. Lewis, St. Cloud; third vice-president, Dr. H. C. Cooney, Princeton; secretary, Dr. Earle R. Hare, Minneapolis; treasurer, Dr. F. L. Beckley, St. Paul; delegate to the A. M. A., Dr. J. W. Bell, Minneapolis; alternate delegate, Dr. A. E. Spalding, Luverne.

St. Paul was selected as the place of meeting for 1920.

MISCELLANY

THE RED CROSS TO CO-ORDINATE ALL PUBLIC HEALTH MOVEMENTS

What the United States government has been found unable or unwilling to do in the way of co-ordinating and promoting public health movements, it now appears, the American Red Cross can and will do.

At a dinner given on September 23 by the Northern Division of the Red Cross at the Minneapolis Club, when nearly 200 men and women interested in public health were present, Dr. Farrand, peace-time executive of the Red Cross, outlined a plan by which the greatest of all war time organizations proposes to get by and support every legitimate agency for the prevention of disease. Probably none of the physicians present were unaware of the facts that Dr. W. A. Evans, of Chicago, brought out in clear and forceful fashion, but to certain of the laymen it was undoubtedly surprising that "of those who are sick and should be cared for in hospitals, in some instances, not over 2 per cent are so cared for, and 98 per cent who should have that type of care are without it," or that "one-third of the death certificates at the State Department of Health of South Carolina bear the statement that no physician was in attendance."

It must have been particularly gratifying to the members of the medical profession to hear Dr. Evans declare:

"The country was told with a definiteness that amounted to a guarantee or promise that the soldiers engaged in this war would not die from diseases as those who died in previous wars. Those promises have been kept; there has been the fulfillment."

The entertaining, if caustic, comment contributed by the toastmaster, Dr. Charles H. Mayo, was a continual delight to those who heard it.

"You know," he said, "that 77 per cent of all of us have something physically wrong with us and that the majority of people at 53 are scrapped, that at the age of 59 doctors die."

A slogan for America, he said, should be "Educate the Public," and at this point he called upon Dr. M. L. Burton, president of the University of Minnesota, who said:

"I think there is nothing more stimulating than the unbounded confidence of America in education; for, if the war seems to have donated anything, it is, that education and democracy are absolutely inseparable.

"On the thirtieth of last January there was introduced in Congress a bill known as 'the Smith-Towner bill,' which has already been suggested by our presiding officers to the establishment of a Federal Bureau or Department of Education headed by a cabinet officer and representing the educational interests of the country, just as the Secretary of Agriculture or the Secretary of Commerce represents other great activities and interests of the country. Now, this bill is before

Congress at the present moment, and I am of the impression that there is no larger service that the American Red Cross or intelligent and discriminating citizens everywhere can render to our country than to make sure that the present Congress, after it gets through with the peace treaty and has ratified it—as it will—gives serious consideration to the educational interests of the country as a whole."

In outlining his proposal for the field of Red Cross activities, Dr. Farrand said:

"We have our state departments of health, and we have our municipal departments of health. Unfortunately, probably, for this country, it is impossible for us to have an adequate controlling Federal department of health. We are so organized that our states are sovereign in matters of health. I say, again, I am not sure whether that is fortunate or unfortunate. It delays—it certainly delays equal progression along these lines. But at the same time it does permit, where the machinery of the Federal government is slow in operation or slow in getting under way—it does permit this or that commonwealth to take such steps, independently, as may be necessary. It also serves to do what, I think, in the last instance an essential thing—it tends to throw back the responsibility for health more and more towards the individual locality. In the last instance we have got to look to the municipality or to the town for the control of health, for after all disease is a localized affair and health is an individual matter.

"For that reason you can see that, if we are to have an actually successful attack upon the problem of preventable disease, it has got to be a localized matter, it has got to be directed against disease where it is found. I think you will see in a moment why I am saying that, because it is one of the reasons that an organization such as the Red Cross is in a position to lend a hand in reaching the results that we all know can be reached and must be reached, if the country is to be made sound and wholesome and healthy.

"Now many of us—and Dr. Evans has been one of those who has been laboring day and night for years—many of those who have been interested in the health of the nation, have been trying for years to find some way, some agency, to bring about this co-ordination of interests, this co-ordination of movements, this concentration of energy, upon the public health problem.

"The Red Cross proposes to hold itself ready to deal with the always-present, continuing disaster of ill health and disease; and it proposes to take the necessary step, and that is to put itself behind the movement for the co-ordinating of these various movements that are now present in or among our American people. It proposes to have the Red Cross study its community in each case, in the case of each chapter or each branch. For my part I think its program is far more applicable, in many cases, to the small rural community, where the need is even greater than in our cities, to put itself behind the movement for seeing to it that there is established an actual physical center through which the health activities may operate; and I hope the day will come, as it will come—whether through the Red Cross or other agency, it is coming and coming with rapidity—when every community in the United States will have an actual physical building or room or group of rooms, according to the size of the community, in which will be centered all of the health activities of that community, whether official or unofficial, in order that the health conditions of the community may be under survey and control."

With this presentation of the Red Cross proposal, characterized by one of the speakers as the answer to the prayer of the public health men all over the United States, Dr. L. G. Rowntree, chief of the Medical Department of the University of Minnesota, introduced the resolution: "That this body express its entire sympathy with this program of the Red Cross, and that it pledge to the American Red Cross its support; that this body request its presiding officer to co-operate with the Red Cross in the execution of its plan and to call upon the members of this body and other individuals qualified for the work, for such support as is necessary for the success of this movement."

ANOTHER STRIKE!

The lunatics all are as mad as can be,
They're raving and running amuck;
Their disturbance has all of the others outclassed,
For the movement has reached the asylum at last,
And all of the inmates have struck!

The maniacs fight with their might and their main,
The Bedlamites jump from their beds;
The Insanity Union has uttered this threat:
Unless their demands are instantly met,
They'll tie up every wheel in their heads!

—*The Idiot.*

NEW INSTRUMENTS

THE VEGA NASAL VACUUM PUMP (HAND PUMP) PERFECTED

This pump is a pocket hand pump, and is designed for home use by the patient between treatments at the physician's office with the usual power pump.

This pump is composed of a stiff rubber bulb with enough resiliency to create a sufficient degree of suction, when the compressed bulb returns to its normal shape, to draw from the nasal cavity all accumulated pus and crusts that are commonly removed at the office of the nose and throat man.

The nasal cavity is sealed by the soft palate, as shown by arrows in the above illustration, under the control of the patient, who also closes one nostril with his finger. A few contractions of the bulb readily cleanses the entire nostril cavity.

The edges of the outer end of the glass bulb, which enters the nostril, are so curved backward and into the bulb that no injury to the mucous membrane at the point of contact is possible.

The instrument has been in use for some time by many of the leading nose and throat specialists, and is highly commended by them for the specific purpose for which it is intended. Fortunately, simple as the instrument is, it is not an appliance that a patient can use except under the prescription and direction of a physician.

NEWS ITEMS

Dr. M. C. Piper has moved from Sanborn to Rochester.

Dr. N. T. Owen has moved from Lead, S. D., to Rapid City, S. D.

Dr. Merton Field, formerly of St. Peter, is now located at Northfield.

Dr. V. W. Embree, of Yankton, S. D., is doing postgraduate work in Chicago.

Dr. F. O. Kettlekamp has moved from Huntley, Mont., to Billings, Mont.

Dr. T. J. Maloney, of St. Paul, is home from France and has resumed practice.

Dr. John H. Henkin has moved from Elk Point, S. D., to Sioux City, Iowa.

Dr. R. M. Malster, of Carter, S. D., is home after two years' service in France.

Dr. W. W. Nauth, of Winona, has been visiting the surgical clinics of the East.

Dr. E. C. Haagensen has moved from Hillsboro, N. D., to Grand Forks, N. D.

Dr. Jackman has returned from France and has resumed his practice in Minot, N. D.

Dr. Frederick J. Plondke, of St. Paul, is in the Canadian Rockies hunting big game.

Dr. C. M. Robillard, of Faribault, is home from army service, and is again engaged in practice.

Dr. F. W. Fergusson has resumed practice in Hensel, N. D., after two years' service in the army.

Dr. E. W. McEssy, of Fargo, N. D., is taking an extended course of postgraduate work in New Orleans.

Dr. M. J. Fiksdal, of Webster, S. D., has returned from army service and resumed his practice in Webster.

Dr. Frank O. Brigham has returned to Stanley, N. D., after two years of service in the Hawaiian Department.

Dr. Roy F. Sackett, who formerly practiced at Canton, S. D., is home from France and has located in Parker, S. D.

Dr. A. G. Reedy, of Fort Yates, N. D., has moved to Arthur, N. D. Dr. Reedy formerly practiced at Regan, N. D.

Dr. G. A. C. Cutts, of Grove City, has moved to Los Angeles, Calif. Dr. Cutts had practiced in Grove City eighteen years.

The Mississippi Valley Conference on Tuberculosis, which met this year in Des Moines, Iowa, will meet in Duluth next year.

Dr. H. E. Dunham, who has been practicing at Elgin during Dr. Bleifuss' absence in the service, will locate at Minneiska.

Dr. G. H. Mesker, of Olivia, has been appointed mayor of that city to fill out the unexpired term of the deceased mayor.

Dr. D. W. Sullivan, who entered the service from Britton, S. D., has returned from the service, and has located at Milbank, S. D.

Dr. O. B. Sheets, of Carthage, S. D., is spending a year in the study of pediatrics at the University of Minnesota in the graduate course.

Dr. W. Z. Flower, who has practiced in Gibbon nearly a third of a century, has sold his practice to Dr. F. P. Frisch, of Kimball, and will move to Minneapolis.

Dr. B. V. Bates, of Wheaton, recently received the Distinguished Service Cross for unusual bravery in looking after the wounded in battle over a year ago.

Dr. Thomas Lee, formerly school physician of Hibbing, is recovering from a severe sickness contracted in army service, and will resume his school work in Hibbing.

Dr. C. C. Pratt, of Mankato, who has returned from army service in Montenegro, tells a wonderful story of the poverty of that country and the low state of its people.

Dr. F. A. Brugman, who was recently discharged from the army at Camp Lewis, Wash., has returned to Minot, N. D., to take up his eye, ear, nose, and throat practice.

Dr. A. A. Giroux, formerly of Dalton, is now located in Duluth, and will hereafter confine his practice to the diseases of infants and children. He has offices in the New Jersey Building.

Dr. J. T. Schlesselman, who has been doing postgraduate work in New York City since his discharge from army service, has resumed his eye, ear, nose, and throat work in Mankato.

Dr. Robinson Bosworth, of St. Paul, who recently resigned his office with the State Advisory Commission, will go to Memphis, Tenn., to build and conduct the city's municipal sanatorium.

The Southern Minnesota Medical Association will hold its annual meeting at Mankato on Dec. 1 and 2. A program in no respect inferior to those of previous meetings will be prepared.

Minnesota and the Dakotas sent many representative tuberculosis workers among our physicians to the Mississippi Valley Conference on Tuberculosis at Des Moines, Iowa, last month.

Dr. George G. Dreyer, professor of pathology at Oxford, England, delivered three addresses last week at the University of Minnesota. Dr. Dreyer is one of the leading pathologists of the world.

Dr. H. W. Hill of the Minnesota Public Health Association has become eccentric. He has long been opposed to kissing, and now he would prevent hand-shaking. "Salute" is the final word. Where is the joy of life?

Dr. C. B. Boyle, who has had charge of the practice of Dr. R. G. Nelson at Cut Bank, Mont., while the latter was in war service, will return to Eureka, Mont., or seek a new field. Dr. Nelson has returned from the service.

Dr. A. G. Wethall, of Minneapolis, is doing postgraduate work in urology in the New York Postgraduate Medical School and Hospital of New York City. He will return to Minneapolis about the middle of November.

Dr. Robinson Bosworth, of St. Paul, who was formerly secretary of the Minnesota Advisory Commission, was elected president of the Mississippi Valley Sanatorium Association at its annual meeting, held in Des Moines, Iowa.

The Hennepin County Medical Society has resumed its noon-day meetings in the form of a study hour with a general topic for the month. The topic for the remainder of October is "Pediatric Problems in General Practice."

Dr. Martin Kranz, of Mandan, N. D., died last month at the age of 59. Dr. Kranz was a graduate of the University of Minnesota Medical School, class of '05. He practiced in several places in Minnesota before going to Mandan.

Dr. F. M. Crain, of Redfield, S. D., is at the head of a plan to build a county hospital in memory of the Spink County soldiers. No pledges are binding until $50,000 is subscribed. The plan may be followed in other counties than Spink.

Dr. Charles D. Harrington, the *x*-ray specialist of Minneapolis, goes east this month to visit the Eastern hospitals and investigate the use of radium. Dr. Harrington began the study and the use of the *x*-ray the year following its discovery.

Dr. Ida M. Alexander, of Sauk Center, Minn., who recently contributed to our columns an interesting paper on her experiences in France, has been appointed director of the tuberculosis work in North Dakota, with headquarters in Bismarck.

Dr. E. R. Grigg, city health officer of Butte, Mont., is begging the physicians of that city to observe the birth-registration ordinance. It seems incredible that a particle of urging should be necessary; but it is in both Montana and Minnesota.

Dr. C. C. Hoaglund, of Veblen, S. D., has sold his practice to his former associate, Dr. C. R. Senescoll, and has gone to New York City where he will take a year's postgraduate work in the Manhattan Eye, Ear, Nose, and Throat Hospital.

The call for Minnesota physicians to enlist for emergency work in case of a return of the influenza this year, has seemingly made but little impression on Minnesota physicians, for very few have written the State Board of Health concerning the work.

Dr. Theodore H. Sweetser, of Minneapolis, was married on September 3 to Miss Marion Morrow, of Davenport, Iowa. Dr. Sweetser recently returned from France, and is now instructor in pathology in the Medical School of the State University.

Dr. P. B. Jenkins, secretary of the South Dakota State Board of Health, has given warning to the heads of all county boards in the state that precautions against an outbreak of influenza should be taken. There are a few cases in the state at the present time.

The program of the Mayo Foundation lectures and clinics to be given in Rochester during October, November, and December, can be obtained upon application to the Mayo Clinic. These lectures and clinics are open to all visiting physicians and surgeons.

The Woman's Auxiliary of the Hennepin County Medical Society entertained the wives and daughters of the medical men attending the Minnesota State Medical Association so well that all these women will want to attend all future meetings of the Association.

At the October meeting of the Minnesota Academy of Medicine papers were presented as follows: "The Diagnosis and Treatment of Intrathoracic Goiter," by Dr. Gustav Schwyzer, of Minneapolis, and "Tumors of the Vulva," by Dr. W. H. Condit, of Minneapolis.

Dr. Andrew Carr, of Minot, N. D., who has recently returned from France, is now in Chicago, where he has charge of the Eye Department of the Illinois Eye and Ear Infirmary. Dr. Carr is also assistant to Dr. Brown in the Eye Clinic of the Medical Department of the University of Illinois.

The outside clinics being held and the addresses delivered by the superintendents of the public tuberculosis sanatoria in the Northwest constitute a public-health work of incalculable value, easily comparable with the work done with the patients in such institutions.

The Northwestern Hospital of Minneapolis is in need of an interne for all services. A suitable salary will be paid. The opportunity to gain a year of splendid experience is an unusual one. For information address the Superintendent, Miss Jeanette Christianson, N. W. Hospital, Minneapolis.

The charter of the Brown-Redwood County Medical Society was revoked by the Council of the State Association at its annual meeting in Minneapolis this month. This action was taken because the Society refused to try Dr. A. L. Fritsche on charges of disloyalty as directed by the Association last year.

The splendid attendance at the Minnesota State Medical Association was largely due to the fine weather, which made the auto ride to Minneapolis from all parts of the state a delightful outing. A large number of men drove from 100 to 150 miles, and many of these men would not have come on trains however good the schedules.

The *Minneapolis Journal* paid THE JOURNAL-LANCET the great compliment of giving an entire page of the Magazine Section of its Sunday issue of October 5 to an editorial ("The Kink in the Mind") in our issue of Sept. 15, reproducing the editorial in full. The aim of the editorial was to point out the source of the world's unrest as seen by a neurologist.

The Aberdeen District Medical Society of South Dakota held a meeting last month in Webster upon invitation of the Peabody Hospital Clinic of that city. Interesting papers were read and discussed, clinics were given at the hospital, and a fine banquet was served in the evening. Dr. Leo M. Crafts, of Minneapolis, presented a paper before the Society.

We are glad to have a North Dakota physician correct our recently published list of physicians from that state who reached the rank of major in the war. The names of Dr. Frank E. Wheelon, of Minot, and Dr. E. R. Lindner, of Munich, should be added to the list. Major Lindner is still in service as Attending Surgeon at Department Headquarters in the Hawaiian Department.

The visit to Minneapolis of Dr. Livingston Farrand, head of the American Red Cross, and Dr. W. A. Evans, of Chicago, to present a plan of co-operation among all public-health movements, was an interesting event. Dr. Charles H. Mayo acted as toastmaster at a dinner given at the Minneapolis Club to about 200 men and women interested in public-health work. A full account of the meeting is given in another column.

THE COMMERCIAL EXHIBITS AT THE MINNESOTA STATE MEDICAL-ASSOCIATION MEETING

The commercial exhibits at the annual meeting of the Minnesota State Medical Association drew, as usual, many visitors. They always present things of interest, and men in charge of them have interesting and often new information to give out.

The principal exhibitors this year were Messrs. Noyes Bros. & Cutler, with a general line of surgical instruments; the Standard Medical Supply Company, with a large general exhibit of their line of goods; Reid Brothers, of Seattle, with a line of fine surgical instruments; the Wm. Meyer Co., with their Universal Multoscope for *x*-ray work; the Lederle Antitoxin Laboratories, with a large line of serums; Dr. Upsher Smith with his Elixir-Novo-Hexamine, made after his own formula, and digitalis plants raised by his own hand.

The Medical Protective Co. was represented by its general agent, Dr. Garber.

The Physicians' Twin City Exchange had charge of the information bureau, and donated a retiring-room for the ladies; and the work done by the Exchange was so highly appreciated that a vote of thanks was given its manager, Mrs. Christenson.

H. C. L.

Meats are now costing on the average about
50c per 1,000 Calories

The average cost of fish is
50c per 1,000 Calories

Eggs are now costing
60c per 1,000 Calories

Quaker Oats are costing
5 1-2c per 1,000 Calories

Two dishes of Quaker Oats for one cent—for the cost of a bite of meat.

Yet Quaker Oats is almost a complete food. It is nearly the ideal food.

The foods which cost nine times as much do not compare in nutrition.

These are breakfast facts, we argue, which people nowadays should know.

Quaker Oats

We flake Quaker Oats from the queen grains only—from just the rich, plump, flavory oats. We get but ten pounds from a bushel. This extra flavor adds delight, and it costs no extra price.

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Chicago

PUBLISHER'S DEPARTMENT

PLATT'S CHLORIDES

Platt's Chlorides is an odorless disinfectant of strong germicidal power that is agreeable for use in the hospital or the residence. It has been on the market for many years, and is extensively prescribed by physicians.

The manufacturers are glad of the opportunity to send any physician, upon application, samples and booklet.

Address for further information Henry B. Platt Co., 53 Cliff St., New York.

THE ANASARCIN CHEMICAL CO.

This Company is sending to 100,000 physicians a diagnostic wall chart of renal diseases. This chart is 16x24 inches in size. It gives a table of the pathological urinary findings and a list of the abnormal urinary constituents, together with a score of microscopic slides, showing in detail what the microscope reveals in urinary analysis.

The chart and tables are very interesting, and have special value to the general practitioner who is not an expert technician. It is worth asking for, and will be sent free to any physician.

THE PURITY BREWING CO.'S "REAL BEER WITHOUT ALCOHOL"

Dr. Peter Lauritzen is without doubt the best posted man in the Northwest on the manufacture of malt products for medical purposes. Many years ago he manufactured and delivered daily in Minneapolis hot fresh malt, wholly non-alcoholic, and he later organized the Purity Brewing Co. for the manufacture of malt products.

This Company now offers physicians and their patients a "Real Beer Without Alcohol," which is a superior malt product, making a delicious beverage for the sick and the well.

THE POTTENGER SANATORIUM

Whenever or wherever the leading men of America get together to discuss tuberculosis, as at Des Moines last week, the name of Dr. Pottenger will be found on the program, for Dr. Pottenger is a recognized expert in the treatment and care of the tuberculous.

Dr. Pottenger's Sanatorium at Monrovia, Calif., in the foothills of the mountains, is an ideal place for the consumptive; and the staff of the institution will do all that is humanly possible for the victim of this insidious disease.

The Sanatorium maintains an office in Los Angeles, 1100 Title Insurance Building, where letters of inquiry may be addressed.

THE FAIRVIEW HOSPITAL

Even a brief visit to the beautiful Fairview Hospital, in its superb location on the banks of the Mississippi River, and under a management that robs hospital life of practically all that is unpleasant and unhomelike—such a visit, together with a glance at its modest rates, will convince the most optimistic that men and women have consideration for the poor, for persons of moderate means, and even for the fairly well-to-do when the large cost of being sick falls upon them. The prices at Fairview are even lower than the ordinary prices of board, and for these prices the best of hospital care is offered.

The physicians of Minnesota and adjoining states sending patients to Minneapolis should know the high character and excellent management of this hospital.

THE NATIONAL PATHOLOGICAL LABORATORIES

The above-named laboratories are truly national in scope, with offices in Chicago, Brooklyn, St. Louis, and New York; and their work is of so high an order that dissatisfaction with it is quite unknown. All their laboratory assistants are experts, and their work is so extensive that their judgment is often worth more than the mere findings in the specimens they examine.

The cost of their service is so far below the cost of maintaining a laboratory and a technician, there is no excuse for even the general practitioner to fail to use such service.

We believe every medical man should fully realize the value, to himself and his patients, of the public laboratory, and the National will be glad to give every physician a full report of the work they can do for him. For information, address The National Pathological Laboratories, 5 South Wabash Ave., Chicago.

THE WESTERN CHEMICAL CO., INC.

When the above Company, with its business office and manufacturing plant in the village of Hutchinson, Minn., distributed, only a few years ago—it seems only the other day—samples of its preparations, all the medical men were astonished at the handsome form in which they were put up. From a few standard pharmaceuticals, the product of the Company has grown to a large list, including such specialities as "Idothol," an ideal iodine preparation, which has met with great favor with medical men.

Now the Company announces that the growth of their business compels them to move to the heart of the market of incoming raw material and outgoing products. They have selected for their new and permanent home the corner of Malcolm and University Avenues, Minneapolis, thus putting them in market touch with both St. Paul and Minneapolis.

The Company's standard pharmaceuticals are unexcelled in either quality or form, and their specialties are exceedingly gratifying to all physicians.

Samples and descriptive circulars of their products will be sent upon request. They may be addressed at Hutchinson, Minn., until their new quarters are ready for them.

LOWER PRICE FOR MEDINAL, THE WIDELY-USED "SAFER" HYPNOTIC

For more than ten years Medinal has firmly held first place against all new-comers in the field of hypnotics, sedatives, and antispasmodics. Its ready solubility, quick absorption, and prompt, and complete excretion account for its great efficiency and safety, now known and appreciated alike by specialists and general practitioners all over the country, in private, as well as institutional, work.

True to the earlier declaration of Schering & Glatz, Inc., that they would reduce the price of those of their products which had advanced considerably during the war, as soon as the cost of raw materials, etc., would

permit, the following reduced prices for Medinal are now announced:

Medinal Tablets, grs. 5, 10 in box, per box.....$0.60
Medinal Tablets, grs. 5, 100 in bottle, per bottle.... 3.85
Medinal Powder, in 1-oz. cartons, per carton..... 3.25
Medinal Suppositories, box of 6, per box..... 1.00

Medinal, like all the other well-known S. & G. Products, is manufactured in the U. S. A.

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OPERATION FOR ACUTE AND SUB-ACUTE MASTOIDITIS: RESULTS IN A SERIES OF SIXTY-FIVE CASES*

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Careful observation of cases of suppurative otitis media and mastoiditis is necessary if surgical intervention to lessen the danger to life and to insure the least possible damage to the hearing function is to be instituted before complications manifest themselves. As a rule otitis media suppurativa is considered rather lightly as compared, for example, with appendicitis, although the complications are quite as difficult to manage as are those of acute appendicitis. If the aural surgeon has to wait until he is confronted with the complications of mastoiditis, then he is compelled to sidestep the question of advisability of opening the mastoid to the far more serious responsibility of using any means at his command to save life.

Earache may, or may not, be of any particular significance in a given case, but to the patient it is terribly distressing and has many latent possibilities of danger. Far too often, to the doctor, earache is a trivial and insignificant annoyance. The condition, however, calls for an examination in every instance to ascertain whether or not it is of importance. The usual home remedies may be used afterward in case no significance is attached to the symptom, but they should not be used before examination because they are too liable to obscure the picture. If the picture is that of inflammation, early free incision of the drum to afford drainage is indicated. A culture of the early discharge should be made by the attending physician. In this manner the majority of the surgical mastoids and complications can be avoided.

Every practitioner can look back on a large group of cases of discharging ears in which the patients were caused no particular inconvenience, and on another group, not so large as the first, in which much trouble resulted; the patients were perhaps very sick, some were operated on, and some died. The patients of a third group continued to have the troublesome ear discharge with consequent deafness. The conditions in the last two groups could be avoided for the most part by proper care. The cases of chronic discharging ear represent a very large number of patients who present themselves for treatment at an ear clinic. The condition should not be considered as of no consequence.

In advising operation in mastoiditis cases, two considerations of importance must be borne in mind: First, the avoidance of complications, such as sinus thrombosis with generalized sepsis, et al., and, secondly, preservation of the hearing function by getting rid of the middle ear suppuration. In general the indications for surgical interference in mastoiditis may be summed up somewhat as follows:

1. Displacement of the auricle outward without furunculosis, which always means invasion of the soft parts over the mastoid cortex.
2. Discharge persisting for more than five

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weeks without a tendency to subside. Such a condition, except in young children, invariably means involvement of the mastoid, even though there is no pain over the mastoid. Such an ear, if untreated, becomes the chronic discharging ear. Usually, in this type there is more or less night pain.

3. Marked mastoid tenderness and pain which does not diminish in a few days following free drainage of the middle ear. We have all seen cases which appeared definitely surgical before paracentesis, in which the patients get well following free paracentesis; middle ear drainage should, therefore, be used first.

4. Development of symptoms of sepsis after ruling out other possible factors, such as pyelitis in little girl patients, central pneumonia, and conditions that might cause a septic type of temperature. If the patient has acute otitis, and if there is involvement of the sigmoid sinus, well-directed surgical interference is imperative.

5. Development of symptoms of meningitis in the presence of otitis.

6. Development of symptoms of labyrinthitis in the presence of acute otitis.

The last two indications named are very serious, but cannot at this time be discussed at length.

Patients usually want to know the danger to life in any operation, and it seems to me that they should know the risk. The reports of series of cases from different sources are of much value in this respect. It has been our impression that the danger to life in mastoiditis is greater the longer the operation is delayed and when there are complications or extension of the suppurative process. In looking up the literature one is impressed by the few reports of series of operations in acute and subacute mastoiditis. There are many reports of the radical operation in chronic mastoiditis.

Welty, in 1915, reported his results in 106 cases. There was no mortality. The series included 6 sinus thromboses, 1 temporosphenoidal brain abscess, and 3 serous meningitis cases. Welty completely exenterates the mastoid cells; he has not had to re-operate in any of his cases. Scott and others have recently reported a series of cases of mastoiditis from a military camp, but they do not mention results. Borries reports results in 1,108 mastoid operations from Mygind's service for the last ten years, in which there was a mortality of 10.7 per cent. In only 14 of the 119 deaths was the operation responsible; thus the correct mortality amounts to 1 per cent.

In the present series there were 65 cases, in which operation was done between July 1, 1917, and January 1, 1919. This does not comprise the group in which the radical operation for chronic mastoiditis was done.

Table 1

AGE INCIDENCE

Age	Cases
9 months to 10 years	13
11-20 years	12
21-30 years	8
31-40 years	14
41-50 years	8
51-60 years	6
61-70 years	1
71-80 years	2

It is seen that mastoiditis is not confined to childhood. The average duration of symptoms of involvement was four weeks and six days; the shortest was three days, the longest six months.

The average postoperative course for final healing was 31 days. The shortest time was 15 days in four cases, and the longest 128 days in one case. The latter was that of an old lady who had apparently little reparative tendency. By final healing we mean a dry ear and healed mastoid wound. All but one ear remained dry. In this case the condition was chronic, and the conservative operation was done in the hope that it would be sufficient. The patient had very good hearing, and, since he was a musician, it was necessary to preserve the hearing. As yet the radical operation has not been done.

There were 55 uncomplicated cases. These include cases of epidural abscess and cases in which the sinus had been uncovered by the disease process, etc. Six were sinus thrombosis cases. Two patients had ligation of the jugular, two had meningitis when operated on, and one had extensive perisinus abscess; this patient had acute nephritis. One who had pre-operative facial paralysis recovered. There were four deaths—two from meningitis and two from erysipelas. One of the two old men who developed erysipelas, died three weeks after operation, and one died six weeks after operation. The two latter deaths could not be said to be due to operation.

In the sinus thrombosis cases the average duration of ear suppuration was a little over three weeks. In one of the sinus thrombosis cases in which the jugular was ligated and excised the patient was very sick. One patient had pleurisy with effusion and was operated on under local anesthesia. The patient with the perisinus abscess and nephritis was probably the sickest.

In all but three of the patients operated on the hearing was improved or brought back to normal as compared with the other ear, and in these three the hearing was the same postoperatively as preoperatively. It can usually be assumed that the hearing will be as good after operation as it was before the onset of the otitis, provided the disease process has not been of such long standing as to have caused too much scarring in the middle ear.

In this series of 65 cases we used what we choose to call the complete mastoid operation because the mastoid cells were exenterated. It has not been necessary to re-operate on any of the patients who were in the acute or subacute stage. We believe that the rather short convalescence has been due, in part at least, to the method of operation and the manner of closing the posterior wound. The average time for the middle ear to become dry was about seven days (at the third dressing). The posterior wound then healed rapidly with surprisingly little deformity.

CONCLUSIONS

1. In cases of definite mastoiditis operation is indicated reasonably early. The mortality is practically nil.

2. Preservation of the hearing function is fairly certain.

3. A second operation should not be necessary, except for a complication, such as sinus thrombosis or brain abscess.

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DISCUSSION

Dr. L. G. Hill (Sioux Falls): I want to compliment the essayist on his splendid presentation of this subject. It is one of great interest, and too great importance cannot be attached to this condition.

There has been a great deal of mastoid complication following the influenza this year, and lately we have had more experience in mastoid work than usual. Perhaps there is no pathological condition, outside of mastoid conditions, that calls for more careful diagnosis than this. The surgeon who does mastoid work learns to take a picture of the whole condition before he arrives at his decision regarding operation. There is not any one symptom apparently that he can tie to and say this indicates an operation. A patient suffering from mastoid trouble may have no rise of temperature and still be in a critical condition. There may be very little pain; there may be very little bulging. Of course, we are often told that the bulging of the posterior superior wall of the canal is indicative of this operation. That perhaps is the most specific condition calling for operation.

Early paracentesis, to which the essayist called attention, is very important and is too frequently overlooked, and when it is performed it is too frequently done without enough thoroughness. It is rather doubtful whether this paracentesis can be properly done without making more preparation than the average physician makes for it. Half of the punctures that are made, are made in a sort of haphazard way in the dark, or in the home with improper light, and consequently it is not done in a thorough manner.

The essayist mentioned Dr. Welty. I had the pleasure of being with him for a month, and he does a great deal of this work in San Francisco. I was impressed with the importance he attached to the puncture of the tympanic membrane. He operates on all of his patients in the hospital, and gives them a general anesthetic, usually gas, and here, under all the aseptic precautions surrounding any operation, this paracentesis is done. He makes quite a fuss over it, and he gets quite a large fee for it. He said he used to go out to the home of the patient with his head nurse and look in and make a job and thought he had done a paracentesis. Now, his patients come to the hospital, and with the assistance of the nurse and others he gives an anesthetic, and does a very thorough radical opening; and frequently, as the essayist stated, the symptoms are relieved and the patient recovers, and drainage takes place without further surgical intervention.

The essayist did not dwell very much upon the surgical procedure, but I do not quite agree with some of our radical friends who make the statement that any ear that is discharging for over two weeks calls for a mastoid operation. I think that statement is a little radical. Of course, there is danger in delay, but there are many discharging ears, many cases of acute otitis media, which, if cared for properly and drained thoroughly, will recover without an operation; and I think all of you who have had experience in that line will bear me out in that statement. I am not in the habit, when I see a case of acute otitis media, of telling the patient or parent that this patient will have to undergo a mastoid operation, although some will differ with me in this. There are a great many things that will enable us to clear up an acute otitis media,—the ice-bag, heat, and drainage,—and, with proper care and attendance many of these cases will clear up, and I am frank to say, I think there are patients with acute otitis media who have undergone a mastoid operation where more lenient treatment would have secured a complete recovery. I think occasionally a mastoid operation must be done, but not always.

It may be a little outside of the question, but I have noticed that occasionally an ear complication would follow a throat operation. You have all noticed that, and I have been in the habit for years of carefully instructing my throat patients about blowing their nose. This might seem a little trivial, but to me it is very important. I have seen many cases of ear infection following a throat operation, and I am sure you all have. Why? The patient blows his nose and hacks and spits too much. You know that when a child has a cold, the mother says, "Blow your nose, blow it hard; blow it again." And what is the result? Infection from the nose and throat is blown into the ear,

and you have an acute otitis media. Tell the patient not to blow the nose; tell him to do what the grandmother used to do—sniff, or draw it back into the nose, and spit it out. We used to think it was a sin to sniff the nose. It is a virtue. Do not allow patients to blow their noses so much after nose and throat operations, and if you do not instruct them along these lines they will do that and you will get a great many infections.

The dressing following a mastoid operation is of importance. The day has long since gone by when we used to dress them frequently and clean them out. Now, we close them up, and recently I have been in the habit of putting in a rubber drain at the lower angle of the opening and closing the wound entirely, leaving drainage in for about three days. By this time a sinus is established, and you can remove your dressing and get complete drainage and no scar.

I had an interesting case a little while ago of a young woman who was operated on three months before for an acute mastoid condition, and following the operation, which was done by a competent surgeon, the pain continued, and three months later she presented herself at our clinic. We found that a brain abscess had developed. This condition, no doubt, was due to the fact that the cells were not properly and completely eradicated. In doing the operation great care must be exercised in cleaning out all of the infection. The treatment is purely surgical, and nowadays we expect our patients to be up and about shortly after the operation. We do not confine them to bed very long, and we do not find it necessary to use dressings very often. We very seldom dress a case until the fourth or fifth day, and only a few dressings are required until the patient is discharged.

Dr. J. G. Parsons (Sioux Falls): I was very much interested in Dr. Lillie's paper, and particularly in regard to the statistics which he brought out from the series of cases he reported. I also wish to thank him for giving the statistics from the clinic in Copenhagen. There is, I think, a notion that there is a larger mortality to be expected from mastoid operations, *per se,* than what is reported from this clinic.

There are a few points I think worthy of some consideration here, for the benefit of men who are going to determine whether or not they are going to have these patients operated on.

As to the time element and how long we should wait before operating, of course it is understood you cannot time these cases with a stop-watch, and when the hand gets to a certain point operate. You must use judgment all the way through. I would rather insist on an early operation. Perhaps our friend Welty is overenthusiastic, and, if you make a mistake in doing a mastoidectomy, it is a very rare thing to make a mistake on the other side. The cases which are operated on earlier, as Dr. Lillie has brought out, are the cases which have the greatest margin of safety in their favor, and are the cases which heal most rapidly. Personally, I should not wait five weeks for a suppurating ear to finally give me warning, in the absence of a lot of other evidence, before I should operate.

A number of years ago (I think it must have been fifteen years ago) Brunel, of Paris, cut the time down to three weeks before operating,—that is, if an ear continues to suppurate after drainage is instituted, (and that does not mean merely prodding a hole through the tympanic membrane), he would operate. There should be a long incision to insure free drainage, otherwise these openings will close up.

In these cases there is something more than the ordinary mucous surface of the tympanic cavity that is involved. A small mucous surface, as in the tympanic cavity, will not take all that time to drain out. There is something else involved. We ought not practice persistence in these cases as much as we do. We should try to get at them early, and, if there is any one symptom which I believe is more important than anything else, it is not rise of temperature, it is not tenderness, it is not the bulging ear, which is the last thing we look for. Do not wait for these symptoms. Look in with a head-mirror, and see what the drumhead looks like. Use the ear speculum and determine positively if you have swelling in the posterior superior quadrant of the drumhead and adjacent wall of the external canal.

Regarding the blood-clot operation: I am in favor of it for the reason that, if properly done, there is often primary union. In the ordinary run of cases, there is no contra-indication to it. If there is a free incision of the drumhead you will convert mastoid diseases into a simple case of otitis media, and pus will run out through the external canal, and in more than half of the cases you will get primary union, as pointed out by Reik, of Baltimore. In these cases you get a much better cosmetic result and more rapid healing than you would otherwise.

Dr. E. D. Putnam (Sioux Falls): Politzer, who is termed the father of otology, told us many years ago that in every disease of the middle ear, there is disease of the mastoid. He went so far as to say that he did not think a mastoid ever healed out of itself. Perhaps the pus would lie there dormant for the rest of the patient's life, or it might explode, like a volcano, years afterwards. I spent a long time under the instruction of an ear man who used to tell his class of boys in lecturing on middle ear diseases that, if he was far removed from an ear man, rather than run any chances, he would prefer one of them to open his mastoid and drain it for him.

In all branches of surgery where there is pus to deal with, it seems to me I have seen more bad results from proscrastination. I have operated on a few mastoids where I felt guilty of advising operation, but always found disease of the mastoid in these cases.

Just yesterday at Watertown I saw a case. Some of the physicians here saw the same case. Dr. Johnston operated upon him. The drum membrane was still intact, congested, and, I think, bulging, although I looked at it through a magnifying otoscope, which misled me somewhat. I looked at the drum membrane, and it seemed to be of natural size. The mastoid was extensively diseased. This was a case of short duration. The patient was sent to Luther Hospital on account of bronchitis and, possibly, a pneumonia, so it is only of a few days' standing.

Several years ago there was a paper read by a Sioux City man from whom I got the idea of when to operate on a case of acute mastoiditis. He placed it at four weeks. I have followed that closely. If I have varied

the thing it is to shorten the time to three weeks, although three weeks is a very popular term. Dr. Lillie places it at only five. There are some little things we can go by when to operate on these cases. Take an ear that is discharging profusely, with no pain, and you may let it run along until the fifth week. The patient appears well otherwise. If there is some pain, cut it down to three or four weeks, and never in my experience have I chiseled into a normal mastoid where there was a suppurative otitis media. So, if we can, particularly those of us who are engaged in this kind of work, help those men who see these cases only occasionally, it will enable them to decide what to tell the family. I would say early operation, and get a complete recovery.

Dr. E. Klaveness (Minneapolis, Minn.): I am not going to speak to you today as a man who has had a large experience in the handling of ear cases, but I shall endeavor to talk to you a little from a larger aspect. I shall recite to you the experience which life insurance companies have had from a careful compilation of statistics of these cases with reference to the mortality-rate in ear diseases, and I will begin by saying that, whereas in all cases where there was *only one attack* of otitis media in the applicant for life insurance from one to five years prior to the time of the application, the mortality-rate in these cases was always less than 100 per cent of the expectancy. So we ordinarily always accept these applicants without any further inquiry, but, if the applicant shows in his history that there has been more than one attack of otitis media—two or three or more attacks within the last two years—we find that the mortality-rate jumps up 115 per cent. That in itself speaks clearly. It indicates a decided risk to the life insurance company because it is far above the normal mortality-rate.

The next point I wish to call your attention to is this, that the totally deaf applicant for insurance is an extra hazard, and it is at once evidenced in the statistics of the medico-actuarial investigations, which show the mortality-rate in this class runs up to 130 per cent of the expectancy. Someone is to blame for allowing a man to walk around as a totally deaf fellow citizen, and it is chargeable to one single thing, and that is. some man will dilly dally before doing a mastoid operation, or, if a mastoid operation is performed at all, the result is no better than total deafness. If a surgeon does an operation to save life and leaves the man totally deaf, that is placing an extra hazard in the pathway of a fellow citizen's life. I am speaking without much experience about the timeliness of operation in middle ear suppurative cases. I am compelled to conclude, however, that early operation should be performed if you are going to absolutely not only render the best service to your fellow-man but also be instrumental in setting the public mind right.

I am gratified over seeing that the customary subject before medical societies of when to operate in cases of appendicitis has been settled. At any rate, it has been seemingly settled. Now, the mastoid process is a perfect parallel to the appendix, and is only amenable to one treatment, and that is surgical.

A short time ago I read with surprise an article by Dr. Heath, of London, England, describing the experience of the British War Ministry in connection with surgery performed in the British Army during the war. The most miserable surgery was performed by the otological section because they were laboring under old text-book ideas of waiting too long before operating and sending soldiers back again with total deafness. Dr. Heath argued in favor of early operation, and he made use of what he terms a conservative operation, which is early paracentesis, and subsequent mastoid operation if it does not yield to exploratory surgery, as advocated.

The school medical officer in London reports 12,000 cases of suppurating ears in London amongst the school children every year, with a total annual death of 800 children, meaning one in every sixteen. We must have a similar painful record, I should judge, in our larger states or larger cities, and it is high time to begin to center our thoughts upon this field; and the rest of the medical profession should give hearty support to those doctrines which the otologists have spoken of. It is about time for the rest of the profession to learn that they should throw away aural syringes and not make use of any such downright foolery. (Applause.) To begin with, what would you think of a man that would go out to a river, already polluted from sewage running into it from a town situated one mile up the stream, and thinking he could purify it, would throw in an antiseptic tablet three times a day? That applies to syringing the auditory external canal when you know that a suppurative otitis has its origin farther up in the canal, and perhaps involves the mastoid cells. It is not amenable to any other treatment than surgical, and the earlier operation is done the better, because you are sure of one thing, namely, you will retain the sense of hearing, and, having shown the great importance and value of hearing so far as longevity is concerned and normal mortality. I think it is our bounden duty to advocate early operation.

There is one point to which I desire to call your attention, although it is a little digression, and that is, I am glad to bring you a message from the American Life Insurance convention. It was my pleasure to attend a meeting of the Medical Section of the American Life Insurance convention last March at Chattanooga, Tennessee, and for the first time I had the pleasure of hearing a member of this convention pay his respects to the medical profession. Dr. Lee Frankel, of the Metropolitan Life Insurance Company of New York, presented a paper upon public health in its relation to life insurance companies in which he alluded to the last influenza epidemic, and said that, if it were not for the incalculable good rendered by the medical profession in the years gone by, whereby the life insurance companies through the saving of mortality have been able to build a financial structure that took care of them through the influenza epidemic, there would have been a national catastrophe in this line.

I bring this message to you, and I am sure you will continue to give your services to your fellow men in each and every community, and particularly on this subject, and along with this advice from the experts to have these cases of suppurative otitis media given early and timely attention. If you cannot get them early to the otologist, be at least sure that you will give them the advantage of early paracentesis.

Dr. R. D. Alway (Aberdeen): The discussion on this paper seems to be centering almost entirely on the time of operation, and every one seems to be of the opinion that the early operation is the better. Personally, I believe in early operation. I think it is the

safest, both from the standpoint of the life of the patient and also as regards future hearing, but I think the choice really depends upon one or two things that have not been brought out in the paper or in the discussion, one of which is the kind of infection. You take the ears where there is not any particular swelling in the canal, not very much tenderness or pain over the mastoid, and quite free drainage. I think the kind of infection should be ascertained. If you have got a pure streptococcic infection, I do not see any advantage in delay. I do not think it is safe to delay. I also think that here is one of the places where the leukocyte count is worth something.

Dr. Lillie spoke about erysipelas. I have in my short experience had perhaps a dozen cases of erysipelas complicating mastoid disease. Most of them have occurred in adults. I do not think I have had any patient older than fifty. When I first got these cases I was usually alarmed, but they have all done very well, and withstood the infection and made rather good recoveries.

I had one case this winter which had me guessing for a while. This patient at the time of operation had erysipelas in the lobe of the ear, and had plus four albumin with casts and pus cells and streptococcic infection. The erysipelas extended all over the face up into the scalp, and finally started down the back and continued down below the scapula. The woman had had a high temperature and was very sick, although not delirious. I do not know how far the infection would have extended had I not built a carbolized fence around it. I thought it might stop the spread of the infection if I had the pure carbolic acid go an inch below the erysipelas. The inflammation extended up to and onto the scar and stopped there, and my patient began immediately to get better.

I was very much interested in Dr. Lillie's statistics of the cases they have had in Rochester at the Mayo Clinic.

Dr. J. P. Isaac (Freeman): As a general practitioner of medicine, I try to get as much information out of these papers and discussions as possible.

I think we sometimes forget that the greatest number of early cases pass through our hands, and, if we would resort to timely paracentesis, we might, in many cases, prevent a mastoid operation. A great deal depends upon our viewpoint. What do we think of a running ear? What do we think of a case of infection of the middle ear with a little bulging of the ear drum? Shall we let it go until rupture of the drum takes place and spontaneous healing occurs? Are we inclined to be conservative? The lesson I learn is this, that the teachings of these specialists are correct. It has been proven in my general practice.

I have had the two types of cases that Dr. Lillie mentioned. I advise that the general practitioner should open the ear-drum, and, if within twenty-four or more hours the patient is not relieved, it is time to refer that patient to a specialist. The general practitioner should be able to do a paracentesis when he thinks it is indicated.

However, I had one patient whose ear-drum was opened within twenty-four hours from the manifestation of the first symptoms, and she had absolutely no relief, and within a few days she had to undergo a mastoid operation.

Dr. Lillie (closing): I wish to thank the gentlemen for their free discussion of my paper. The different points brought out are well taken. As I stated, there is no one particular symptom by which we can diagnose mastoiditis; we must take into consideration the general condition and clinical picture of the patient. I do not think you can definitely set a time when to open the mastoid in the presence of a discharging ear. If the ear is doing well, and the patient looks well, I take a conservative course and wait. I have seen such cases last eight weeks, and still get well with perfect function. On the other hand, if the discharge from the ear does not diminish, then, as Dr. Parsons has pointed out, if we cannot account for it on the basis of a simple otitis, we must account for it on the basis of a mastoiditis or a nasopharyngeal infection. We must eliminate this particular factor, then operate for the conservation of hearing particularly.

We see more of these cases in the later stages than most of you do. They have been allowed to run along for two or three weeks until they give definite trouble. We have had a large number of cases of otitis media with nasopharyngeal infection, some 150 cases, and of this number we have had to do only three mastoid operations. We do not wait for bulging of the membrane tympani before making an incision. If the membrane is red we open it. Signs of inflammation, redness and pain are indications sufficient for resorting to paracentesis. This is the province of the general practitioner. I believe that every general practitioner ought to use an otoscope. I believe statistics show that at least one-fourth of the general work of the practitioner is acute infections of the ear, nose, and throat. Unfortunately, a great many men were trained in general medicine when sufficient time was not devoted to the diagnosis and examination of the ear, nose, and throat, but it is easily acquired. It is of great benefit both to the physician and to the patient.

I was much interested in the statistics the gentleman (Dr. Klaveness) brought out from the London school. They are very important, and it is for this type of cases that I particularly make an appeal. It is the otitis in children which is usually considered by parents, and by far too often by the medical profession, as insignificant and calling for no particular observation.

With reference to the remarks made by Dr. Alway: I pointed out that the aural discharge can be cultured. In a case of discharging otitis the causal factor is usually a streptococcus of some strain. If it is the streptococcus mucosus or the streptococcus hemolyticus, we must be on our guard in this type where pain is not relieved by a free paracentesis, for it may mean that the mucous membrane folds in the attic and mastoid antrum are swollen and causing pressure; and that is the type in which, after three or four days, if there is no diminution in symptoms, a mastoid operation should be instituted. I think that is the important kind of infection that is causing the trouble.

There is one thing about otolaryngology that I am not particularly pleased with, and that is the fact that we are classed as specialists. I like to feel myself that I am a medical man who does ear, nose, and throat work. An old professor of surgery once said, "I like to be called a medical man who operates." We look into and study general medicine from a nose and throat standpoint, and, as Dr. Parsons brought out in his paper, we have a lot in common, and until we all work together and quit cutting each other's throats, we shall not accomplish what we should.

THE USE AND MISUSE OF FORCEPS IN LABOR*

By O. Bjornson, M. D.
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In choosing a subject upon which to address you several occurred to me, but this one particularly on account of its being practical and timely, and because it might prove of interest to a gathering of medical men who are at all interested in the subject of obstetrics. Having had a not inconsiderable experience in this work, and therefore in the use of forceps, I would like to place before you some things I have learned and found useful in my work, in the hope, perhaps, that you may also find it helpful in your practice. I present them, not as anything new or original, but just as a few things learned in the school of experience that I have used and found to stand me in good stead.

In the country districts the doctor is often severely handicapped in this work by his inability to secure skilled assistance; but this is compensated for to some extent by the fact that in the country fewer pathological cases are met with than in the city. With each succeeding year one notes the increased necessity for assistance in what would otherwise seem very ordinary cases of labor. Why this should be so, I am not prepared to say, but the modern woman, especially if city bred, proves increasingly inadequate to accomplish her first labor unassisted. As the aid in the great majority of cases is rendered through the use of the obstetrical forceps, it becomes incumbent upon us who engage in this work to develop the highest degree of judgment and skill in the use of this most useful instrument, equally capable of rendering much-needed aid by its timely and skillful use, and also of working untold damage by its improper and unskillful application. To anyone engaging in this kind of work, it becomes more and more apparent that midwifery is not the simple, uncomplicated, homely process that our forefathers considered it to be when the midwife, male or female, stood by, or sat upon the edge of the bed until after a brief hour or two the new arrival came into the world. We are all agreed that obstetrics takes on more and more the nature of a surgical operation, requiring all the judgment, skill, and antiseptic precautions and technic demanded by the latter, and that the attendant is quite as much a surgeon as though he were to perform some operation. And speaking of the two together one cannot help being impressed by the relative importance of the two as viewed from the standpoint of the public.

The obstetrician is a very common, ordinary mortal, receiving, all too often, little reputation, less thanks, and the least remuneration for his long hours of anxiety and vigilance. We all know, of course, that the commonness of the event is to a great extent accountable for these facts, and only by a combined effort on our part to raise the standard of obstetrics can we hope to receive the credit and emolument justly due to those who engage in this trying and exacting branch of medical practice. I have no hesitation in saying, and I think you will all agree with me, that when one has carried a woman safely through a difficult and complicated labor, one has rendered her a very great service, indeed, and has been to her everything that the word *obstetrician* implies, namely, one who stands by.

In some of the older text-books on obstetrics there was given a definition of normal labor somewhat as follows, only much longer: "The child should be born alive by the unaided efforts of the natural forces, without any complication in any of the three stages of labor within twenty-four hours of the onset of the true labor pains." This definition has always appealed to me as being very good; and, keeping it in mind, I have been impressed with the frequency of cases that do not conform to this definition. How often first labors, especially, depart widely from it; and yet in this country, where rickets is very seldom met with, difficult labor due to narrowing or deformity of the pelvis is comparatively rare. The same, to a certain extent, is true as regards cross-births, brow, face, difficult breaches, eclampsia, and placenta previa; to mention only the most formidable complications.

But there are lesser complications that one frequently meets with, which, though by no means serious or unsurmountable, tend to result in protracted labors, with more or less exhaustion of the mother and injury to the child; to overcome which often taxes the skill and resources of the attendant to the utmost. In this class come cases of delayed labor due to failure of the head to enter the pelvic inlet, resulting

*Read at the Thirty-second Annual Meeting of the North Dakota State Medical Association, at Grand Forks, June 24 and 25, 1919.

from malposition, as when the occiput is posterior, or from disproportion between the head and the pelvis, and, lastly, from misdirection of the uterine force, as in cases where the uterus has become over-distended from hydramnios or multiple pregnancy or where the abdominal wall has become lax, due to over-distension or separation of the recti muscles. Here, instead of the uterine force being directed along the axis of the pelvic inlet, it is directed at an agle to it, so that pains may go on for hours and yet no progress be made.

After the head has descended into the pelvis there are yet conditions which result in delay. The most common of these is the posterior position of the occiput and disproportion between the head and the pelvis. How often do we find, even when the head is well engaged, that regular and strong pains go on for hours, and yet the head does not advance to any appreciable extent and we are compelled to interfere in the interest of both mother and child.

Then lastly we get cases where, owing to slow dilatation of the os, increased resistance, or obstruction to the advance of the head, the uterine force gives out, and the pains become less frequent and feebler and may even cease altogether. This is uterine inertia, which often calls for artificial intervention.

But before considering how each of these difficulties may be met by the use of the forceps I would like to say a few words on the application of instruments. Before their use we are taught that certain conditions must be present:

1. The head must present by the vertex.
2. The head should be engaged,—that is, the greatest diameter should have passed the pelvic brim.
3. The os uteri should be fully dilated. Nothing in all obstetrics could be more pernicious than applying forceps and pulling the head through a partly dilated os.
4. The membranes should be ruptured and retracted over the head.
5. Uterine contractions should be present in sufficient force and regularity to ensure detachment of the placenta and closure of the uterine sinuses, for otherwise a serious or fatal hemorrhage is likely to follow.
6. The occiput should be directed anteriorly.

This last is not usually given in the text-books, but it is my firm belief that many of the difficulties of the forceps operation would be obviated if this rule were followed.

By keeping these conditions in mind and strictly adhering to them, the use of instruments will prove a much easier and more satisfactory operation. Sometimes, at the earnest pleadings of the patient to be relieved or at the vigorous behest of firm-faced relatives to "do something," one is led to disregard these rules and to attempt an ill-advised delivery by instruments, leading to more or less disaster to mother and child and, incidentally, to one's reputation. The premature administration of chloroform is also apt to lead one into error. For humanitarian reasons the attendant is sometimes coaxed into giving an anesthetic early in the second, or even late in the first, stage. A few whiffs usually suffice to abolish all uterine contractions, and the hapless attendant finds himself with a patient semi-narcotized, no pains, and the conditions justifying the use of forceps far from present. Here nothing remains for him to do but what practically amounts to an *accounchement forcé,* deliver by whatever means he can, an operation where muscular force plays the leading part.

To avoid this error it is well to adopt a fast rule never to administer a general anesthetic unless, if the pains cease, and the forces of labor are suspended, the conditions necessary for the use of forceps are present. If the pains are so great as to demand relief, morphine, chloral, or hyoscine is much to be preferred.

The type of forceps to use and the manner of their application are not a matter of indifference. An axis-traction forceps is much to be preferred. For many years I have used an instrument known as the Neville type, which is simply the ordinary Barnes forceps with an axis-traction arrangement applied to the handles, near the lock, instead of to the fenestræ, by means of rods, as in the Tarnier or Milne-Murray type. They can be used as an ordinary forceps without the traction handles in low operations, or the handles, which are attached outside the vulva, can be applied if necessity demands. This is a very satisfactory instrument in every way, and it has been used in Dublin for many years in preference to the Tarnier.

In some countries it is the rule that a woman is delivered on her side, and whatever advantages this position offers in ordinary delivery apply equally well in the forceps operation, and once one has learned to deliver in the Sims position he will use no other.

The same is true of the surgical glove. Whatever the rubber glove has done for surgery it

has also done for obstetrics. We all remember with what trepidation we put the ungloved hand into the uterus when occasion demanded, while now we do this with almost entire impunity. Since the advent of gloves I have noticed an almost complete disappearance of the post-partum chill, which was looked upon as a matter of course following obstetrical operations. Where the doctor of the old school was "wigged and gowned" our modern doctor should be gloved and gowned.

All text-books on obstetrics classify the forceps operation under high, medium, and low. By the high operation we mean cases in which, for reasons already given, the head has failed to engage in the pelvic inlet. Such experience as I have had with the high operation has been unfavorable, and this is in harmony with the later writers on obstetrical subjects, who strongly discourage or condemn it. Even with experience and ample assistance one should hesitate before attempting it. Before resorting to it one sometimes tries to push the head into the pelvis by suprapubic pressure. It does no harm, and sometimes succeeds. With a lax abdominal wall when the presenting part is driven in the direction of the promontory, instead of into the pelvic inlet, a good plan is to apply a tight abdominal binder between pains. It often works like a charm; the head enters the inlet, and as the patient is always a multipara the rest of the labor usually ends very quickly.

These means failing we then resort to forceps. For this operation an axis-traction instrument is an absolute necessity. To apply forceps to the head while still above the brim and giving a few steady pulls just to see what happens, in itself does no harm. Such a procedure is quite justifiable so long as one does not fall into the error of thinking that once instruments are applied labor must be finished that way at all costs. One soon learns to recognize the absolute immobility and absence of response to the tractions. After a few tentative pulls, remove the forceps and desist from further efforts. What, then, shall we do? The lone practitioner would most likely do a version or, if help were available, craniotomy or Cesarian section.

The next class of cases are those in which the head has engaged in the pelvis, but, owing to disproportion between them, or to malposition of the head, labor becomes arrested and help is required. The delay in the great majority is due to the posterior position of the occiput, and here I wish to beg your indulgence for referring to this complication so often. But in my experience this troublesome and irritating complication has been met with oftener than almost any other. The text-books give its occurrence in something like 20 per cent of all labors. Though I have not kept a close account, I am convinced that it is met with in a very much larger percentage than that, perhaps double. In fact, I have had a series of cases in which it was present in fully one-half. In these cases all the processes of labor, engagement, dilatation, and descent are delayed, and, although in the large majority of cases after hours or even days, the occiput eventually rotates forward, yet a considerable number rotate into the hollow of the sacrum or are arrested transversely. These last almost always fail to deliver themselves spontaneously, and help is required. Much has been written as to how to deal with these cases, a great deal of which, to my mind, is superfluous.

In the text-books much space is given to the pros and cons of whether to apply the forceps so as to adapt the blades to the sides of the head (the cephalic method) or to the sides of the pelvis (the pelvic method). Whichever method is chosen, one invariably meets with difficulty in getting the blades into position, and, even after they seem to be in place, the handles refuse to lock. In fact, the occiput-posterior position is often not diagnosed until an attempt is made to apply forceps, when the difficulty of adjusting and locking the blades reveals the true state of affairs. And even when the blades are finally adjusted and have been closed at the lock, often with more force than is justifiable, a new trouble arises. On making traction, that stony immobility felt when pulling on the head still above the pelvic brim, makes itself apparent. No amount of pulling has any effect, and sometimes after much useless tugging craniotomy has to be done. These are the cases in which the doctor of the old school used to brace his feet against the bed, and pull with both hands until the forceps slipped and he was sent sprawling backward on the floor. This, of course, is neither necessary nor justifiable, for a much simpler and safer method is at hand, which is to rotate the occiput to the front, a method that I have used for many years with the utmost satisfaction. It is simply this: Put the hand into the vagina, using the hand opposite to the side towards which the occiput points, r.o.p. left hand and vice versa. If one cannot feel the fontanelles, as so often is the case, simply pass the hand further up and feel

for the ear. The direction in which the free edge points determines the position of the occiput. Now grasp the head between the thumb and four fingers and turn the occiput to the front. Forceps can then usually be easily applied. But very often it happens that while you reach for the blades the occiput rotates back to its old position. What to do then is to re-introduce the hand, pass it up beyond the head, place the four fingers over the child's shoulder-blade, the thumb over the clavicle, and then rotate the back to the front, and the occiput will follow along with it. What has surprised me most is the comparative ease with which this can be done, and it has proven helpful to me so often that I have no hesitation in heartily recommending it. Only after the membranes have been ruptured a long time and the uterus is firmly contracted on the child's body do we find this maneuver difficult or impossible. There is then another way: Rotate the occiput to the front and get an assistant to hold the head in place while you apply the forceps. Then give a pull, and the shoulders will invariably take care of themselves. The books on obstetrics advise in difficult occiput posterior positions, where delivery cannot be effected without using unjustifiable force, to do a version or even a craniotomy. Now, it is very much easier to rotate the child on its long axis in this manner than to do a podalic version, which, even in practiced hands, is always a serious undertaking.

A condition similar to the above, only less frequent, is when some measure of disproportion exists between the head and pelvis. The vertex presents, the occiput is in front, the os dilates satisfactorily, and the head descends into the pelvis sufficiently to become fixed, or it may even reach the mid-plane or lower. But, owing to the disproportion, this advance has taken an unduly long time, the uterus tires out, and progress ceases. Here is a very plain indication for forceps; and a very good rule to follow when the pains are gradually growing weaker and the head has made no advance for an hour is to wait no longer. To help a tired uterus that still has the power to contract and retract is good obstetrics, but to extract a child from an exhausted uterus that has power neither to contract nor retract is to expose a woman to a severe hemorrhage.

The same rule may be applied when the head has reached the perineum in first labors. The pains have been good and progress satisfactory up to this time, but the uterus has reached the end of its resources and now lacks the power for the final effort required to dilate the perineum and force the head through the vulvar orifice. The old school taught when the head had reached the perineum to wait two hours, and then deliver. But why wait two hours or even one? One soon learns to recognize the ineffectiveness of the uterine efforts which tell us louder than words that delivery is not likely to take place within anything like a reasonable time. And if we can save this woman two hours, or one hour, or one-half hour of useless effort and distress, why not do so?

Pituitrin and ergot have their use in these cases to a certain extent and may sometimes save putting on forceps, but this is not within the scope of this paper.

Considerable prejudice still lingers in the lay and even the medical mind against forceps. It is said the baby's life is endangered, the mother is horribly torn, and it is much better to wait and let nature take its course. Nothing could be farther from the truth. If we wait until the indications for forceps are present, both mother and child are positively safer with a judicious delivery by forceps than if left to nature.

Much harm has also come from taking it for granted that lacerations are inevitable in these operations. Were the same time and care given to forceps delivery as to natural, imitating nature and not hurrying too much, no more trauma need follow than in spontaneous deliveries. A very large percentage of even first labors can be delivered instrumentally without any laceration whatever, and it should be the ambition of all obstetricians to reduce them to a minimum.

In conclusion, I would say that the forceps is a powerful and indispensable aid to our work, which with well-timed and skillful use is capable of relieving much suffering and promoting the safety and welfare of both mother and child. Improperly and inadvisedly used it is capable of great harm, and may result in much suffering and a life of semi-invalidism.

DISCUSSION

Dr. H. G. Woutat (Grand Forks): I was certainly glad to hear this clear and excellent paper by Dr. Bjornson.

In regard to the frequency of the use of forceps: In my experience it appears to me that I use them less than I did formerly. Possibly I was in the habit of violating some of the principles which are laid down as necessary before forceps should be applied, or I may have become a little more conservative in their use. I think the tendency on the part of women is to put

themselves into physical condition, if it is possible to do so, where they can go through labor normally. I think they are dressing in a more rational manner, and are taking exercises which tend to bring about this condition. I have found in cases where the head is slow to engage, especially if there is looseness of the abdominal walls, if the patient is placed on the side with the legs flexed as well as they are on the abdomen, that it hastens labor quite markedly. I have been surprised to find that labor progressed very rapidly in many cases when this is done.

Occipito-posterior is a frequent complication, and this should be corrected before an attempt is made to bring the child through the pelvis. I have not been very successful in rotating the head with my hand. I think Dr. Bjornson has longer and thinner fingers then I have, which may help him in that procedure. It has been my custom to apply the forceps in this position, and slowly rotate the head with the forceps. Of course, the forceps has to be taken off when the rotation is completed, and, as the essayist has said, the head often rotates back, but if it does it can be held with the hand. I think if one can rotate with the hand it is preferable, but I have never had any bad results in rotating with the forceps. In cases, where the uterus becomes tired and it is necessary to use the forceps, to obviate hemorrhage, I have frequently given a small dose of pituitrin at about the time the head is being delivered. It assists delivery, and I have hardly ever noticed any hemorrhage following this procedure.

As Dr. Bjornson pointed out, the kind of forceps used is very important. Personally, I use the Tarnier, which I find very satisfactory, but an axis-traction forceps should be used in all cases which require anything but the lower application, for the patient is less likely to be injured, as well as the child. In the axis-traction forceps the force is applied in the proper direction, and it is also much easier for the obstetrician. In cases where the head is on the perineum I have been in the habit of using pituitrin, and I find that I am more likely to have a laceration where I use pituitrin than where I use the forceps, especially in primipara. I think I have better control of the situation, and in this manner avoid lacerations.

The tendency among some physicians when applying forceps is to terminate labor very quickly. I think this is an error, because if a little time is taken the head can be worked through the perineum and lacerations avoided in many cases, which is a very desirable thing, for, if a woman passes through her first labor without laceration, she usually goes through the others very much better.

Dr. R. H. Beek, (Lakota): I am much interested in Dr. Bjornson's exposition of this subject, and am sure it has been a very valuable paper to listen to. I think it has recently been my custom to use the forceps less than I used to. Possibly because I have not as much "ginger" as I had a few years ago, but I do not use it so often. Just when it should be used is a question. There may be some indication, but some "household Martha," or the father, may hold you up and not allow you to proceed with the work. I have had a little experience of this kind, but of course we have to use our tact and judgment in order to get people to agree with us.

The application of the forceps to the occipito-posterior position I have always found to be difficult, and have come to view the occipito-posterior position as a pathological condition. I do not know but that DeLee of Chicago is right in considering every labor of a pathological condition. In his excellent work he treats labor as a pathological condition in all cases, and seems to think that the modern woman is getting away from the normal way of delivering her child, and that all births are pathological.

I was much interested in reading the report of Dr. Potter, an obstetrician of Buffalo. When you see that he delivers ten to twelve women a day and gets his sleep you realize he is doing something. How does he do it? He does it by version. You feel as though you would like to have that man's skill, and be able to go in and turn the youngster around and deliver him. This man is a wizard and personally has delivered in the last eight months something like eight hundred cases. He waits until presentation is complete, and then, multipara or primipara, goes in and delivers and is gone, sometimes in twenty minutes. His article appeared in the *Journal of Obstetrics and Diseases of Women,* and I read it several times with a great deal of wonderment to think a man was able to do that. He was criticized severely, but one of the men said that the trend of doctors for obstetrical instruction would be toward Buffalo, instead of toward some other place. It seems marvelous.

I am sure we have all been benefited by Dr. Bjornson's exposition of the subject, and I feel very thankful to him.

Dr. Bjornson (closing): There is little more that I have to add further than to thank these gentlemen who have so kindly commented on my paper.

With regard to the frequency of the use of forceps, I have recently changed my mind. I was brought up in the conservative school, where we were taught never to use forceps except as a last resort. Now, with increasing experience, I find myself using instruments oftener, and apparently with better results. There is undoubtedly some difference between the rural and the city patient, but my experience with the latter shows me that the necessity for instrumental delivery seems to increase year by year.

As to rotating the head with forceps in occipito-posterior positions: That has been done by the best of men, and even so great an authority as Smellie said it gave him "great joy" when he first attempted it. Now most writers advise against it, and I am of the opinion that it is not generally used. Some authorities disregard the position of the occiput entirely, apply forceps, and pull, leaving the turns to nature. With an axis-traction instrument this often succeeds. But then one must remove and re-apply the blades so as to conform to the new position of the occiput. As the blades were not applied squarely to the sides of the head in the first instance, more or less pressure and trauma of the head are apt to result; therefore I have not resorted to either of these measures, as the method outlined in my paper of manually rotating the occiput and, if need be, the back forward, has proved so simple and satisfactory a procedure that I have had no occasion to use any other.

Pituitrin, no doubt, has its uses and also its limitations in these cases. Where a slight disproportion exists, or a resisting perineum has to be overcome, or

when the uterus has become tired, but not exhausted, from a protracted labor, a bulb of pituitrin may give sufficient stimulus to overcome the difficulty, and effect delivery. To use a homely illustration: A horse drawing a load gets fast in a rut; he pulls and pulls, but the cart does not move. Here a sharp blow from the whip will cause him to make an extra effort, and out comes the cart. Similarly, pituitrin acts like a whip and spur to the uterus; it makes increased effort, perhaps just sufficient to overcome the obstruction and end labor. On the other hand, if the obstruction is too great, or the uterus entirely exhausted from hours of ineffectual contractions, to give pituitrin would be not only useless but harmful.

To return to the illustration of the horse and cart, if the horse, after long tugging at the load has fallen exhausted in front of it, to ply the whip on him would be both stupid and futile. Pituitrin has well-defined indications and definite uses, but its action is brief and often disappointing. The routine use of it, especially early in labor, to hasten delivery, is not only an unscientific, but is also a pernicious form of "meddlesome midwifery" that should be avoided by all with a higher aim than just to hurry through a case in order to be in readiness for the next one. When the second stage tends to linger, and there is no definite obstruction, a dose of pituitrin is quite in order, and can do no harm; but if in a reasonable time I do not get results I apply forceps. Judiciously used, both mother and child are benefited, and there is a noticeable lowering of morbidity in the puerperium.

I thank you, gentlemen, again for your kindly remarks, and the members present for their courteous attention.

THE ACTION, USE, AND ABUSE OF PITUITRIN*

By Albert G. Schulze, M.D.
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Pituitrin is the proteid-free and color-free, aqueous extract of the posterior lobe of the hypophysis cerebri, and is standardized according to its blood-pressure effect and its action on the uterine muscle. Its action is that of a stimulator to contraction of all smooth muscle fibers, having a most marked predilection for the muscle fibers of the uterus, and showing its greatest action on that organ. No definition of the action of this drug is complete which does not call particular attention to its phenomenal action in this respect.

One need not spend much time in reading before he is thoroughly convinced of the fact that all writers are by no means of the same mind, and that there finds its way into print much expression of opinion that is none too well founded and is decidedly misleading. For instance, Mundell, writing in June, 1917, says, "To produce abortion and to induce labor it practically always fails." Goetsch, in September of the same year, says, "There seems to be no doubt now that labor can be induced by the use of pituitrin." As a rule, malposition is regarded as a contra-indication to its use, yet a certain French writer reports 100 per cent of success in its use for face and breech cases.

It is to be regretted that some medical journals are not more careful in accepting for print and distribution such radical statements as the following, which appeared in a certain medical journal only a few months ago: "When indicated, pituitary extract may be used in any stage of labor, provided both the patient and the fetus are carefully watched." Such a statement, without even the mention of a definite dose, unbounded by any restrictions or qualifications beyond the exceedingly indefinite one of carefully watching patient and fetus, making its appearance in what is supposed to be a reputable medical journal and ready to fall into the hands of whoever may happen to be a subscriber, can be productive only of harm. The only safe attitude to assume is to pay particular attention to the opinions and statements of experienced and conservative writers and to ignore wholly any and all unqualified and radical statements.

The drug may be obtained at the present time in two different strengths: the surgical, or "S," and the obstetrical, or "O." The product of Parke, Davis & Co. is put out in 1 c.c. ampoules of full and half strengths, respectively, while that of Burroughs Wellcome Co. is obtainable in 1 c.c. and 0.5 c.c. ampoules, respectively, the former full quantity and half strength, the latter half quantity and full strength for the obstetrical kind. This difference must be kept in mind.

The former dose of 1 c.c. is too large, and the consensus of opinion is that 5 minims is proper, which dose may be repeated in ten to fifteen minutes, according to Williams. This has reference to intrapartum use.

Pituitrin has a legitimate field of usefulness in its action on the smooth-muscle fibers of the intestinal tract. In this respect it may be used very successfully, either postoperatively or in the

*Read before the Ramsey County Medical Society, September 29, 1919.

puerperal state, for the relief from simple distention, which it affords the patient and in the earlier return of normal intestinal action. For its stimulating effect in vesical atony, the use of the catheter may often be rendered unnecessary, especially so if the patient be first allowed to experience some slight inconvenience from bladder distention. In either of these conditions the size of the dose need not cause much concern, as the uterus is empty.

Another field in which it can be used with a great deal of satisfaction is in postpartum hemorrhage. Its action, although transient, is very prompt, asserting itself in only two or three minutes, and, when combined with a drug of similar action but of longer duration, such as ergotol, it makes a very safe and reliable therapeutic agent. Some writers also claim that it has a beneficial action in the expulsion of retained placenta and secundines, but Gneerson gives it as her experience that here it is almost useless.

Its action on blood-vessels is to cause a rise of from 18 to 24 mm. of mercury in pressure, preceded by a slight decline. This small increase is not sufficient to do any harm, provided the patient is not already suffering from the effects of a high blood-pressure. In other words, it is to be used very cautiously in nephritics and eclamptics.

It is claimed that pituitrin has no power to induce an abortion, but that its action will hasten the expulsion of the uterine contents if the contractions have been initiated by some other agency.

Considerable time and space have been devoted of late to the consideration of pituitrin in the first stage of labor and as an instigator of labor pains in pregnancy at full term. Let us analyze the condition. If the patient is a primipara the fetal head should be in the pelvis; if not, it is an indication of disproportion, which gives to the use of the drug a contra-indication. If the patient is a multipara, and the fetal head is not engaged, again the drug should not be used. In either case the cervix is not dilated, the membranes are still intact, and in the case of a primipara the soft parts have not been given time to dilate. In other words, we have in the first stage of labor three of the most important and pronounced contra-indications for the use of pituitrin. No physician would apply forceps on an unengaged head, and attempt to drag it through from below, so why use pituitrin and attempt to force it through from above? The same applies to the unruptured membranes and the undilated os. Ruptured membranes and a fully dilated os must be present in the application of forceps, and they are just as essential in the use of pituitrin. The consensus of opinion at the present time is that, so far as the physiologic action of the drug is concerned, it does not have the power of starting labor pains at full term, and all conservative and reliable writers, without exception, condemn the use of the drug for this purpose and in the first stage of labor. Kosmak states that "its narrower field in the induction of labor, with or without other means, is now largely given up."

It is contra-indicated in placenta previa, although some observers state that it may be used in this condition in conjunction with the tampon if all other conditions are favorable. Owing to its action as a vasoconstrictor, and consequently as a raiser of blood-pressure, it is a valuable remedy in shock.

Before continuing this phase of the discussion, it might be of value and interest to consider, briefly, the reasons why we occasionally find the drug to be wholly inert. There may be several reasons. No doubt the idiosyncrasy of the patient may be a factor with this drug just as with any other, and in this way, asserting itself negatively, as well as positively, resulting in no action at all on the one hand and in an unusually strong action on the other. Some patients seem to suggest this idiosyncrasy by the nausea and vomiting that follow its use, and in a few cases by collapse. Kosmak states that its physiologic potency probably varies with the species of animal from which it is taken, and perhaps often with the season during which the animal is slaughtered. We know that the thyroid gland is subject to such variations, and perhaps other members of the endocrine family are likewise. Alcohol renders the drug inert, and this point must be kept in mind in the sterilization of the hypodermic needle and in the cleansing of the site of injection.

So far we have mentioned only the less important fields in which pituitrin may be used, leaving until the last the consideration of the field which really characterizes the drug. When one hears the mention of "pituitrin" one's mind reverts to a case of labor, the two are so intimately associated; and here we find the cases in which this drug enjoys its greatest and most popular use.

To render the use of pituitrin safe in labor, it is imperative that certain conditions be fulfilled, and Mundell stated it well when he said, "An ideal case for its use would be a healthy primipara, late in the second stage of labor, when the

pains have become slight and weak owing to uterine inertia, with a normal presentation and the bag of waters ruptured, with the cervix fully dilated, the head moulded and through the brim just above a relaxed perineum." An analysis of the details of labor in all cases of rupture of the uterus, with only a few exceptions, he states, reveals the fact that pituitrin was abused, having been given to patients who should not have had it.

It is contra-indicated when the uterine muscle is not healthy, due either to a previous Cesarean section or to myometrial degeneration or when the uterus is in a condition of secondary inertia due to prolonged effort, and where we have a large and relaxed lower segment, the forerunner of a rupture. It is contra-indicated when the head is not moulded or sufficiently engaged so that its greatest diameter is through the brim. It is contra-indicated in all malpositions, such as face and occiputoposterior, and in all cases of disproportion. It is contra-indicated when the membranes are intact, and the os not fully dilated.

In all cases the accoucher should be prepared to relieve the patient by means of an anesthetic from the tumultuous contractions that sometimes follow its use; and forceps should be at hand to effect prompt delivery in case the fetal heart drops below 100 or goes above 160 beats.

As far as the mother is concerned, we see the bad results of pituitrin in deep lacerations of the cervix and perineum and even in rupture of the uterus. The first condition adds greatly to the dangers and troubles of the puerperal period, and has much to do with the future health of the mother. The latter condition calls for an hysterectomy, and often proves fatal.

To say that the use of pituitrin lessens the number of cases in which the use of forceps becomes necessary is only half stating a truth. We do administer pituitrin many times as a substitute for forceps, and quite rightly, but often immediately after its administration a new and unforeseen condition arises, which can be met only by the hasty use of the forceps. A fetal heart that was apparently perfectly normal in all respects before we administered the drug now suddenly shows signs of dissolution.

A consideration of the deleterious effects of the drug on the fetus may be profitable. Due to the longer and harder contractions of the uterus, resulting from the use of pituitrin, the rhythmic contractions following each other now so closely that they become almost tetanic in type, the area of placental attachment becomes so constricted and cramped that it interferes materially with the normal circulation of the blood and free passage of oxygen to the child, and the latter becomes asphyxiated. This is the first danger. The increased pressure from above resulting therefrom and the inability of the head to mould itself or the soft parts to dilate quickly enough, gives rise to a great cerebral pressure resulting in hemorrhages.

Mundell has collected from the literature of the past two years reports of 34 cases of fetal death, and 41 cases of asphyxia pallida, in all of which resuscitation was effected only after prolonged and vigorous efforts. The asphyxia following the use of pituitrin, we must remember, is much more severe than in the cases ordinarily seen and in which the drug has not been used. The meconium often makes its appearance, and in many cases there are indication and evidence that the placenta had separated prematurely, or at least partially, as in such cases it was expelled immediately after the birth of the child.

Heard, quoted by Mundell, reports three cases of diffuse nervous lesions due to cerebral hemorrhage and resulting in terrible afflictions at 9, 13, and 19 months of age, respectively. In each case there was a good family history with a history of easy labors, but in each case pituitrin had been administered early in labor and birth was precipitate shortly afterward. All cases had to be resuscitated, and convulsions followed later on; and in two cases they still recur. Heard is satisfied that these are cases of meningeal hemorrhage, and that pituitrin was the etiologic factor in their production. Litzenberg makes mention of post-mortem findings of cerebral hemorrhage in newly-born babies where pituitrin was given when the head was on the perineum and the birth of the child took place shortly afterward. Labor had been normal in all respects except that the pains lagged at the end of the second stage.

It is perhaps not a difficult matter for even the most inexperienced obstetrician to determine in any given case that the membranes are ruptured, the os fully dilated, the head on the perineum and the uterus not exhausted, and that, so far as the mother may be concerned, the administration of pituitrin might be indicated and safe, but no living man can tell what effect that same dose of pituitrin may have on the child.

Goetsch reports that Williams uses pituitrin in his clinics in three conditions. In labor he uses it in a primipara only when the head is below the spines and on the perineum, but in a multipara

frequently when the head is at the spines. His general results have been satisfactory, and it has resulted in a considerable reduction in the use of the forceps. He also uses it in postpartum hemorrhage, preferring it to ergot on account of its quicker action, but always followed by ergot that the latter drug may continue the rather transient action of the former. He also uses it in Cesarean section. It was formerly his practice to administer the drug from three to five minutes before the extraction of the child. However, in order to prevent any mishap in that the child be not delivered as soon as it had been hoped it would be, he now has it ready and injects it directly into the posterior wall of the uterus, just as soon as the child is delivered, the drug's action being apparent in one to two minutes. He does not use it in the first stage of labor, nor in cases of Cesarean section after the sutures have been put in.

Gneerson, a French obstetrician, recently reported her results in 178 obstetrical cases. She used it in all cases where labor was either arrested or protracted. She gives the following contraindications: (1) uterine cicatrices and rigidity of the cervix; (2) when the head is above the superior strait and in any exaggerated disproportion; (3) cardiopathy, hypertension, and arteriosclerosis; (4) when there are signs of fetal suffering, that condition calling for surgical measures. She claims to have had the following results:

1. In simple uterine inertia she obtained success in two-thirds of her cases.
2. In slow labors success was obtained in 88 per cent.
3. In face and breech she had 100 per cent good results.
4. In hemorrhage during the course of labor she was successful in four-fifths of the cases.
5. Her best results were obtained in the expulsive period, 96 per cent of successes.
6. It does not provoke labor.
7. But it is useful in the evolution of abortion.
8. In placental retention it is almost useless.
9. In postpartum urine retention it is sure and rapid, 88 per cent of successes.

At the New York Lying-In Hospital pituitrin used intrapartumly, is conspicuous by its absence. It is used, combined with ergotol, in Cesarean-section cases, just as the uterine incision is about to be made, and it is used postpartumly for hemorrhage, also combined with ergotol, and alone for intestinal distention or paresis and vesical atony. Dr. Asa B. Davis, the chief of staff, who has had many years of rich obstetrical experience, stated frankly that he does not know enough about pituitrin to use it safely and wisely.

I wish at this time to call your attention to several points that are not given the prominence they deserve, or perhaps are not even mentioned in the literature on the subject. The age and parity of the parturient woman must be kept in mind. Advancing years and repeated pregnancies and labors, especially at short intervals, produce degenerative changes in the muscle fibers of the uterus. As a consequence these uteri do not stand the strain of labor. Either they do not exert themselves sufficiently to terminate labor spontaneously or they may rupture. In either case the myometrium is not up to par, and the administration of pituitrin would be an unusually hazardous procedure. I recall the case of a primipara slightly over 40 years of age in whom the fetal head would not engage. She was examined by two of the attending physicians and they gave it as their opinion that the head would engage in time, at least they saw no reason why it would not. When the os was fully dilated the membranes were ruptured manually, and labor was allowed to continue. She labored long and apparently hard. Suddenly the fetal heart was lost, and a craniotomy was done. One of the staff men said that even to the end he could see no reason why engagement did not take place, and gave it as his opinion that, owing to the age of the patient, the uterus had lost its tone, owing to these retrogressive changes, and the prolonged labor produced fetal death. Another case was that on a para-XI over 50 years of age in whom all the previous labors had been spontaneous and easy except the ninth, which was a forceps delivery. She, too, labored long and apparently hard without engagement of the head, and finally the uterus underwent spontaneous rupture. Here, too, the opinion was stated that, owing to the age and parity of the patient, the uterine muscle had undergone degenerative changes, which produced weakness and favored rupture.

Watch the condition of the patient's bladder. On several occasions I have seen the fetal head fail to engage because the brim of the pelvis was partially filled by a tumor mass furnished by a distended bladder. Determine the condition of the anterior lip of the cervix. It is often caught under the symphysis of the pubes, and furnishes a tumor of no small dimensions, hindering the progress of labor in a mechanical way. Not only

will necrosis take place from pressure, but, when in this position, it is unable to share in the normal retraction of the lower and thinned segment of the uterus, and favors rupture. Administration of pituitrin in any of these conditions adds a new and serious risk.

There is another matter concerning which we will have to change our ideas or resort to new and different terms to convey our thoughts. It pertains to the question of so-called "primary" and "secondary" inertia. Inertia may be defined as lack of power of the uterine muscle to contract effectively, and, obstetrically speaking, is of two kinds: That form which may be due to impaired innervation, endometrial degenerative changes, either primary or due to pathologic changes in the adnexa, and which we have called "primary." Whatever the cause, it is inherent in the organ itself. All inertia is essentially primary. There is that other form which we have tried to describe by the term "secondary inertia," and we see it in that uterus which has worked long and hard trying to expel its contents, but has been unable to accomplish it and has been forced to cease its efforts. This uterus is exhausted. Would it not be better if we reserved the word "inertia" to describe the former condition, and the word "exhaustion" for the latter and then in a measure appropriate treatment suggests itself? The former condition is one of laziness, and calls for stimulation; the latter is one of exhaustion, and calls for relief.

I have picked up at random a few cases reported in the literature, to the consideration of which I invite your attention to see if we cannot gain some new ideas or emphasize some old ones.

R. R. Huggins, of Pittsburg, reports a case in which the *measurements were normal,* the *os fully dilated,* and the *head was in the pelvis.*

Pituitrin (1 c.c.) was given, and within twenty minutes the patient was in a state of extreme collapse. A laparotomy, two hours later, revealed a complete supravaginal amputation of the uterus. It is safe to presume that the membranes were ruptured, but there is no mention made of the condition of the anterior lip of the cervix; the age and parity of the patient are not mentioned, nor is the length of time she was in labor, and, while the head was in the pelvis, it does not state that it was on the perineum. The dose was too large. The fact that these conditions were not mentioned suggests that they were considered as unimportant. This case was reported because it was considered as ideal for the use of pituitrin, and the doctor could not understand why he should get such a result.

L. G. McNeile reports the case of a *primipara.* There were indications for the use of the drug; *the head was well engaged,* and there was comcomplete *dilitation; the membranes were ruptured,* and there was *a decrease in the strength* of the uterine contractions. A slight oblique contraction was not recognized and 1 c.c. of pituitary extract was used, resulting in tetanic contractions and rupture of the uterus in about seven minutes. Here the measurements are not stated, and perhaps were not taken. The fact that she was a primipara would of itself be a contra-indication; the head, while it was well engaged, was not on the perineum. He does not state the age of the patient, nor the length of time she was in labor, nor the condition of the anterior lip.

Another case is that of a *healthy primipara,* 20 years of age; position, *occiputoposterior* with the head fairly well in the foramen, *but not descended to the second stage.* The doctor was called at 5 A. M., and in one hour, with a moderately well dilated cervix, *but not retracted,* 4 m. of pituitrin were given. At 6:35, the head *not having descended through the brim,* the doctor was getting ready to apply forceps and 5.5 m. were given. In the second pain after the second hypodermic of pituitrin the woman went into collapse. The uterus had ruptured, and the child was in the abdomen. A laporotomy was done, but the child was dead, and the mother died two or three minutes later. Here, while the dose was commendably small, we do know that we had a primipara with a malposition, a cervix only fairly well dilated and not retracted, and a head that was not coming down. All of these were strong contra-indications. How long was the patient in labor, and what the condition of the anterior lip? The fact that the cervix was not retracted might have been due to a pinched anterior lip.

Mundell, in 1914, succeeded in collecting 3,952 cases in which pituitrin had been used with the result that there was a rupture of the uterus once in every 494 cases, and a fetal death once in every 146 cases. In 1916 he collected 1,392 additional cases in which there was a rupture of the uterus once in every 106 cases, a fetal death once in every 38 cases, and asphyxia pallida once in every 32 cases. It is a sad comment on our use of this drug when these figures show that fetal deaths increased nearly 400 per cent, and ruptured uteri increased over 450 per cent; and it is a plain confession that our knowledge of the

drug and our intimate understanding of the individual in whom we are about to use it are not keeping pace with our enthusiasm.

To summarize I would state—

First. Although pituitrin has been in obstetrical use for some years now and has given, in the hands of careful men, good results, its use, nevertheless, is by no means free from danger.

Second. In a healthy multiparous woman with the os fully dilated and the membranes ruptured, with a head presenting normally and resting on a relaxed and easily stretched perineum, and the pains showing a tendency to lag, we have conditions as nearly ideal for the administration of pituitrin as we can hope to find them.

Third. Keep in mind the age and parity of the patient; do not forget about the bladder; determine the condition of the anterior lip of the cervix and remember that a lazy uterus needs stimulation, whereas an exhausted uterus calls for relief.

Fourth. The dose for intrapartum use should never be 1 c.c., and that 3 or 4 m. is now the accepted dose.

Fifth. The bad results for the mother are deep lacerations of the cervix and perineum and even rupture of the uterus; for the child, asphyxia and cerebral hemorrhage.

Sixth. It may be used postpartumly for intestinal distention and retention of urine, and when combined with ergotol to control postpartum hemorrhage and in Cesarean section.

Seventh. It should never be used in the first stage of labor; it has no place at any stage in a normal case; it should not be used to induce labor at full term, but it may be used to hasten the termination of an inevitable abortion.

Eighth. If you are in doubt, do not use it; if you are absolutely certain, remember the small dose.

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A NEW METHOD IN CATARACT OPERATIONS

By A. Torland, M. D.
MINNEAPOLIS

I am probably not justified in calling my method a new one when we remember that the cataract operation is perhaps the oldest major surgical operation of which there is any record. We know the operation was performed two thousand years ago, when the pitchfork tine was used to push the lens backwards into the vitreous, leaving it there to be absorbed. Since that time all methods used in cataract operations have been centered about one point, namely, the best possible way to remove the lens.

In all surgical operations the object is to obtain the best result with the least cutting and laceration of the tissues; and this is more important in the eye on account of its delicate structure and the disastrous results that follow eye-infection, which is either an extrabulbar or intrabulbar infection.

My method in cataract operations involves the least possible cutting in the eye, and the visual result after the operation is very satisfactory. The following is my procedure: Half an hour before the operation I instil into the eye one drop of a 5 per cent cocaine solution and one drop of a 1 per cent atropine solution. I repeat the instillation of cocaine every five minutes two times more, then one more drop of the atropine solution and then one drop of the cocaine solution every five minutes three times more. This produces a maximum dilation of the pupil, and the eye is practically insensitive.

I sterilize the eye by washing it with about two ounces of a 1-10,000 bichloride solution, after which I wash the eye with about one pint of sterile water.

The eye is now ready for the operation. An assistant holds the patient's eyelids, and I grasp the eye with a forceps below the cornea in the vertical meridian close to the limbus, and make the corneal cut at the limbus to include not less than one-third of the corneal circumference. When this cut has been made I introduce a capsule forceps and remove a piece of the anterior layer of the lens capsule. (If the operator does not have a steady hand he should rather use the cystotome and make a T or a + shaped cut in the anterior capsule layer.) Then I make gentle pressure with the forefinger through the lower lid below the cornea and in an upward direction. By this manipulation the lens will usually come

out without any difficulty. I then tell the patient to look down, and, with a syringe or a funnel to which is attached a rubber tube with a glass nozzle, I wash out the anterior chamber with sterile water. Any remnants of the lens or of the lens capsule are thereby washed out of the anterior chamber. The bulging or prolapsing iris is reduced with the iris spatula. The iris prolapse is rarely so much that it is necessary to make an iridectomy. The eye is then closed and the usual after-treatment observed.

The advantages of my method are the following: First, with the well-dilated pupil no iridectomy needs to be made; second, with the washing out of the anterior chamber the danger of loss of the vitreous is almost reduced to nil (the great risk in washing out the anterior chamber is the loss of vitreous when an iridectomy has been performed); third, no coloboma and an anterior chamber free from secondary cataract.

In conclusion, I will state that my method will in almost every case give $^{20}/_{20}$ vision.

MISCELLANY

A NEW GERM FOE OF MAN—BACTERIUM TULARENSE

An investigation just completed by Surgeon Edward Francis of the U. S. Public Health Service adds another to the list of disease germs afflicting mankind. The germ, which bears the name of *bacterium tularense,* was first isolated by Drs. McCoy and Chapin, of the U. S. Public Health Service, as the causative agent in a plague-like disease of rodents. It was not then known that the same germ also infects man.

Dr. Francis now finds that *bacterium tularense* is the cause of "deer-fly fever," a disease occurring among the rural population of Utah and initiated (according to popular belief) by a fly bite on some exposed surface of the body. The site of the bite and the neighboring lymph glands become tender and inflamed, and they commonly suppurate. A fever, like that in ordinary blood poisoning, develops and lasts for 3 to 6 weeks. The patient becomes very sick and is confined to bed. The first case known to have ended fatally was reported in 1919.

Thus far something like two dozen cases of this disease have occurred in Millard County, Utah, in each of the years 1917, 1918 and 1919. Whether the disease prevails elsewhere is not yet known, but the announcement of the Public Health Service is expected to direct the attention of physicians to cases of this kind.

AN APPEAL FOR HUMAN EMBRYOLOGICAL MATERIAL

In 1906 I observed certain malformations of the human shoulder-blade, and in contributions to current literature I have given them the collective name—"the scaphoid type of scapula," and pointed out some of its hereditary, clinical and anatomical significance.

Probably the most important observation connected with this type of scapula in man is its age incidence, that is to say, it occurs with great frequency among the young and with relative infrequency among the old. There appear to be two possible explanations of this fact:

A. One form of shoulder-blade changes into the other during development and growth, or
B. Many of the possessors of the scaphoid type of scapula are the poorly adaptable, the peculiarly vulnerable, the unduly disease susceptible—the inherently weakened of the race.

I have attempted to answer these questions by seeking evidence in various directions and one of the most important of these has been a study of intrauterine development of shoulder-blades. My investigations in this direction have been limited by the material at my disposal, which has been inadequate for a definite solution of this phase of the problem. I am, therefore, appealing to physicians for fetuses in any and all stages of human development.

It is desired that the material, as soon as possible after delivery, be immersed in 10 per cent formalin in a sealed container, and be forwarded to my address, charges collect. Due acknowledgment will be made to those forwarding material.—William W. Graves, M.D., 727 Metropolitan Bldg., St. Louis, Mo.

HOW A LAY PAPER SEES IT

There's a lot of very sound common sense in Dr. R. C. Cabot's new book on health topics. The reader cannot but feel that Dr. Cabot and our own Dr. Brady [syndicate writer] are kindred souls. Dr. Cabot is writing about diseases and their cure, and points out that not more than 8 of the 150 ailments recognized by medical science can be benefited by drugs. The best prescription, he thinks, is one which permits that "sweet restorer," Dame Nature, to effect the cure.

Everybody who is "run down" wants a tonic—something, apparently, which will repair the damage in spite of the patient. As a matter of fact no tonic on earth, the doctor says, can do this. True, the physician may prescribe a drug which will assist in creating an appetite—and that is the only kind of tonic the conscientious physician knows anything about. Permanent good can only be done by Nature's kind offices, assisted by rest, fresh air, absence of worry, etc. Here's a fellow, for instance, who has had a bad night. He has suffered indescribably from insomnia, and wants something that will make him sleep. There's no such thing available. A bad night, Dr. Cabot points out, means that one has had a bad day—that one has worked too hard, has worried too much, has put too great a strain upon the nervous system. This damage cannot be repaired by dope. The answer is unworried days, not so much hard work, sufficient rest and recreation.

It all simmers down to this: That good health depends in the main upon good habits both of work and recreation. You cannot burn the candle at both ends and get away with it—and if you try, the doctor cannot do anything for you. You must fall back on Nature's restoring processes, and give them a chance.—*Pioneer Press.*

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PRESIDENT WILSON'S ILLNESS

Almost everyone in the land is thinking of President Wilson and his present illness; and most of the people, friendly or otherwise, are deeply sympathetic and hopeful for his recovery.

Notwithstanding the fact that he has been attended by a staff of physicians, all of whom are well known, the public press insists upon a diagnosis, and they have succeeded in bringing into the diagnostic field every disease from abalienation down to zygapophysis, and all of this in spite of the fact that every bulletin that has been in the press has given a fairly reasonable statement, at the same time guarding the privacy of the sick-room. Why should it be necessary for everyone who reads a daily paper to know exactly what the trouble is with Mr. Wilson? Why not be satisfied with the fact that Mr. Wilson has been under tremendous strain for five years; that, while in Paris, in February, he suffered from a sharp attack of influenza, and was unable to take a sufficient period of rest for recuperation, but continued his extremely strenuous work until his return to this country; and then, feeling it necessary to go out into the states to explain his position, he overdid, the strain of the whole situation being too much for his previously enfeebled constitution? What if he did halt in his speech in Pueblo? What if he was obliged to cancel his dates on account of exhaustion, and to return to Washington and put himself under his physician's care, there to stay until he was sufficiently recovered to take up his work?

Some lay papers are exceedingly wroth to think that a minute, detailed description of the President's condition is not given out, but such a statement would not satisfy the people at all, for they want details and more details, just as they do of friends at home who are ill and under the care of a physician. They want to know all about it; their curiosity gets the better of them, and they are not satisfied until they know, or think they know, everything. These things are largely a matter of curiosity, and they are an invasion of privacy which is not a very popular event in the household of the sick.

No one not in contact with the sick patient should attempt to make a diagnosis. Recently someone had a half column in a Chicago paper in which he expressed himself as thinking the President had a "detachment of the retina." Being an ophthalmologist, he acquired considerable reputation from this article. It was discovered later, however, that the President's trouble was far removed from the ophthalmological field. To make a diagnosis of a brain disorder without a careful survey of the patient is a very hazardous thing for the physician who probably knows but little of the situation.

Even if the President is incapacitated for some time, or his recovery is slow, his physicians have certainly taken the right step in keeping him in bed and away from public excitement, and in giving him the best attention at their command. If the President's family is satisfied with the situation surely the public ought to be.

During the past year many people have suffered from unusual illnesses and have developed unusual symptoms, unexpected and unforeseen; yet, somehow, Nature helps them through, and they make good recoveries. Fortuntely, the President is cut off from all these comments, both of newspapers and individuals, and therefore is not suffering from the many diagnoses which have been made by irresponsible parties.

THE NEW EXECUTIVE OFFICER OF THE MINNESOTA STATE BOARD OF HEALTH

Dr. Charles E. Smith, Jr., of St. Paul, who has been associated with Dr. H. M. Bracken, the well-known secretary of the Minnesota State

Board of Health, for the past twenty years, has been elected to that office, as Dr. Bracken recently withdrew from the State Board of Health and became Surgeon in Charge of the Bureau of War Risk Insurance for the Government.

Dr. Smith brings into the office a familiarity with the work of the State Board of Health and a large acquaintance with men in public life, and he has the entire confidence of the Board, as well as of physicians in the state. In a measure, the election of Dr. Smith as secretary and executive officer eliminates the possible political elements which might have crept into the State Board of Health had an outsider been chosen, and we hope, for the sake of the State Board of Health of Minnesota, that Dr. Smith will receive the support of physicians who are interested in public health matters and that they will assist him in his endeavors to continue to keep Minnesota in the forefront of States having regard for the health of their citizens.

At the last meeting, when Dr. Smith was elected, the Board also adopted regulations to be put into force in the event of the recurrence of influenza. This is a very wise step in preventive medicine. Sometimes we become thoroughly armed for a crisis, and because of this the crisis may not arrive, but, if it does, the State Board of Health will be ready to meet it.

Mr. Edward J. Lynch, U. S. Internal Revenue Collector, appeared before the Board relative to the use of narcotic drugs. He called attention to the fact that the Federal courts have ruled that physicians may prescribe narcotics only for their own patients and only in cases of extreme emergency. This rule, of course, is subject to some elasticity, but it is made in order to prevent the unconscionable and commercial distribution of drugs through physicians who have contracted the drug habit themselves and who are unable to differentiate between the right and the wrong, from a medical point of view, although the Government holds them very closely to the legal point of view. In spite of this, however, enormous quantities of narcotic drugs are being used, sold, and delivered all of the time.

THE RESIGNATION OF DR. C. H. KEENE FROM THE MINNEAPOLIS SCHOOLS

Dr. Charles Keene, who has been at the head of the Hygiene Department of the public school system of Minneapolis, has resigned to accept a position as Field Secretary of the Delaware Tuberculosis Commission. This is a very regrettable occurrence, for Dr. Keene has been a valuable man to the Minneapolis public schools. But he did not secure the support of some of the members of the Board of Education,—that is, he did not secure sufficient encouragement for him to go on with the work without an advance in his salary and without the moral effect that his work might accomplish, which means the moral support of the Board when the work is done right, and the non-support when they failed to see medical matters as they were seen by Dr. Keene.

To show that the schools have been handicapped, Dr. Keene says at the present time Minneapolis has, on an average, one school physician for every twelve thousand pupils, approximately, when the normal number, as given in a bulletin recently issued by the United States Bureau of Education, is one physician for every three thousand pupils; and in the army there was one physician for each thousand men. This shows that school inspection has dropped very materially in efficiency.

When Dr. Keene started in with his work he had eight physicians helping him. Later, this number was cut down to three, and then increased to five, while the school registration in Minneapolis has reached sixty-two thousand. There seems to be a sufficient number of nurses in the schools, but even this force will have to be increased unless the number of physicians is increased.

The hygiene budget for the schools is less than 2 per cent of the total Board of Education budget. This might easily be increased and amplified in some way so that better work could be done.

It is to be hoped that Dr. Keene's successor, if one can be found who will be willing to give his whole time, will be more adequately paid, for it is poor economy to let a good man go when a few hundred dollars more would keep him in the work, and keep him as he should be kept.

THE BREAKING OF A BAD HABIT

Physical Culture, in a recent issue, has a little timely suggestion about breaking bad habits, and the article ought to have more widespread circulation.

There are a great many people who have bad habits which they will not admit, nor perhaps do they realize their existence, partly because they are lacking in intelligence or are indifferent to the welfare of others, or perhaps they have an

idea that they can stop them whenever they choose.

Many of the bad habits which exist are due to imitation, based upon a congenital mental deficiency. Those who are of feeble will, who are wrong in their construction, and who have an unthinking mind, can clearly be classified as deficient, and yet many of these unfortunates can be helped by proper educational methods, such as are carried out by our various schools for feeble-minded people.

Then there is the higher grade of feeble-mindedness,—those who are supposed to have enough intelligence to change their ways. But even this class may be of the moron type, high-grade defectives approaching the normal mental standard, and yet not quite able to qualify. They are good natured, and apparently quick and keen, but there is something lacking which keeps them under the zero line. These two classes of people cannot stop their bad habits except by change of environment and forceful instruction.

Then there is the man who has grown up with a good mind, but surrounded by a lower type of individuals. He acquires, unconsciously often, methods, manners, and habits that are disagreeable and unpleasant to his fellow men. As he goes higher in the scale of industrial or professional life he meets with men who have better manners and better habits, and he imitates them, dropping his old habits for those that are better, thus curing himself of the bad effects of his environment. Some of this class go on improving up to a certain period in life, when their former bad habits return. This class has reached the pre-senile or senile stage, where bad habits are pathological and are not under the control of the individual.

People who are anxious to improve their intellectual status are those who have will power and determination to break off what they find is a bad habit, and this may be done at almost any age. Some of the bad habits of the race have been brutally broken by the Government by its stringent prohibition laws, also by the Harrison drug act. It is rather remarkable how many people can drop a bad habit if they are presented with an argument that has force and persuasion in it. A man who has been a periodical drinker most of his life, and who goes on tremendous alcoholic bouts, may suddenly awaken to the fact that he is acting the part of the fool, and by a firm determination and a good resolution he becomes a normal, non-alcoholic man. One who has been addicted to drugs, as many of the old-fashioned people were, to taking opium for thirty or forty years, sometimes realizes that he is up against a proposition, a difficulty in securing the drug to which he was accustomed and thought he needed, and he reforms. And it is rather astounding to find that some persons of determination and resolution are able to drop drugs without the slow process of a cure by gradual withdrawal. They find that the proper way to break a bad habit is to stop it at once and entirely, and they are very much surprised to find that it is a very easy matter.

The man who purges himself of alcohol or opium begins to find within a very few days, perhaps in a few hours, that he is better for the abstinence, and he congratulates himself and becomes again a normal man with normal instincts and in a better physical atmosphere, and establishes cordial relations with his fellowmen.

Of course there is a large class of people who would like to stop their bad habits, but haven't the force to do it, and they go from bad to worse unless they run up against a stone wall, in which case their habits break themselves. It is the fear of breaking a bad habit that prevents many a man or woman from discontinuing the use of liquor or drugs. If they could be assured that this fear is unfounded, that their physique will not suffer from the absence of a poison, a large proportion of them would reform. Unfortunately, a large proportion do not want to break their bad habits, and they will stoop to almost any method in order to continue in their ill-mannered way. If they want to do what is right, if they want to break a habit, they can do it. These are the people who require assistance and encouragement. They should have their habits explained to them, and the necessity of discontinuing an unnecessary evil should be impressed upon them.

In some instances it is necessary to establish a new habit to take the place of the old one. They must have some work or play which replaces and acts as a substitute for their old ideas or habits. Of course there are a few, a limited few, who have a lowered physical resistance after the imbibition of poisons, whether drink or drugs, and it may be necessary in a few cases to gradually withdraw the drug or liquor, and substitute something that is helpful in its place,—food, particularly; rest, essentially; and isolation and restraint, if necessary.

Among the other bad habits which most of us acquire is the habit of talking too much, perhaps writing too much, and this habit can be

broken sometimes by acts of violence on the part of others. Many a man has shut off his speech center and his writing center by having someone jump on him, metaphorically speaking, for his errors. He eventually sees the force of the argument and ceases the habit which he thought was an accomplishment.

There are many people who go through life ill-mannered and always remain disagreeable and unpleasant. These people need a sudden force, or sudden change of mind, in order to get away from their entanglements. The man who is habitually profane has now become a nuisance. People do not like that sort of thing, and society has gradually cultivated a more refined atmosphere. People who have disagreeable habits are taught by the public health departments to change their manners and habits. The necessity is explained to them, and those who will see the error of their ways reform. Those who will not, continue until they are ostracised by someone or by the community. The man who spits on a carpet or on the floor of a vehicle or on a pavement is looked upon as simply ignorant and dirty. Many of these are ordinary, common, ignorant people, and it would require a large trephining opening, with a printed list of instructions thrust into their brains to change their views. The osteoplastic flap method is not a bad institution, and there are many men in whom a lot of extraneous matter might be let out by making a wide opening in their heads.

A minor habit, yet one that is most disagreeable, is that of coughing or breathing in a neighbor's face. This is unpardonable, inexcusable, and intolerable, and it would be no crime for someone to say to such an offender, "your breath is bad, your stomach is out of order, and you had better see a physician." Some might take this as an insult, but the average man will profit thereby.

We all have bad habits, some of them small and some of them great, some of them breakable and some of them absolutely incurable. It is to be hoped, however, that the future race will develop a clear-minded set of men and women who will see the folly of their ways and the necessity of conforming to standards that are normal and not pathological.

THE MINNESOTA PUBLIC HEALTH ASSOCIATION

We desire that the attitude of THE JOURNAL-LANCET toward the Minnesota Public Health Association shall not be misunderstood by being construed either as an attitude of wholly approval or disapproval, for it is neither. The Association is maintained by public subscriptions, mainly, of late years, by the sale of Red Cross Christmas Seals. The amount of money passing through the hands of the Association is very large, and we are glad to believe, indeed, to know, that it is doing great good; but the whole system is open to many abuses, for the Association is run very largely by two or three men, one of whom is conducting a private institution, which has already been advertised in the literature of the Association in a wholly unjustifiable manner. Then, too, the Association seems antagonistic to the State Board of Health, and often usurps the prerogatives and duties of that Board. And some of the Association's school nurses, through whom much of its work is done, are very incompetent and are officious in the extreme, creating antagonisms to such work that will be long lasting and harmful.

In spite of these short-comings we shall continue to give the Association helpful publicity and encouragement, and we shall do so in the hope and belief that the Association will endeavor to minimize the evils inherent in its loose organization and lack of responsibility to any authority outside of its board of directors who are, in a large measure, creatures of a small managing committee.

The sale of Seals this year will reach an enormous figure, perhaps far over $6,000,000, and this enormous sum will be raised because of the splendid, the untarnished name of the American Red Cross Society. The sum hoped for from the sale in Minnesota is $250,000, a part of which will be retained by the Minnesota Public Health Association. As this money is obtained in the name of the Red Cross Society, it seems hardly fair that any part of it should be expended without all the safeguards against abuse thrown around the expenditure of any part of it. In a word, the American Red Cross should not loan its name to the collection of money without throwing about the expenditure of such money all the safeguards that have gained public confidence in the work of the Society.

We offer this criticism in the most friendly spirit, and we hope it will be received as constructive criticism, whose purpose is to protect the Minnesota Public Health Association from possible future harm that would call for only destructive criticism.

We venture to assert that such warning is needed by every group of men spending the con-

tributions of the public, never so generous as today, without the safeguards that surround the expenditure of private funds in large enterprises.

We now wish to commend the forthcoming sale of Christmas Seals by the Minnesota Association, and to advise our readers to encourage the work of the Association through county organizations; but, at the same time, we urge the generous givers in this cause to watch the course of their organization, lest abuses of a serious character creep through the crevices that exist in most voluntary organizations of this kind.

THE OMNIPRESENT FEE BILL

Years ago Minneapolis adopted a fee bill, in the Hennepin County Medical Society, which was supposed to be a guide for the younger men, and also erroneously supposed to be a guide for the men who appeared in court to either defend or prosecute a bill against a patient.

At the meeting of the Hennepin County Medical Society, in September of this year, the question arose, "Shall we revive or revise the fee bill?" The fee bill which was first printed was a product of some twelve years ago, and very few see the necessity of bringing the matter up again, particularly at this time. It would simply mean, at least to the public, that the physicians were putting themselves on a labor organization program—that they were adopting coercive and "Bolshevik" methods. After very little discussion and after everyone had agreed that the fee bill is a useless, worthless "scrap of paper," that it is followed by no one, that every man makes his charge to fit the patient, whether poor or rich, the Society unanimously declined either to revise, or to revive by a "hypodermic" of wasted words, a defunct organism.

When other societies take up this question they will run up against the snag which was met in the Hennepin County Society, namely, that the public feels that the doctors are trying to put something over with the agitators just at this important and critical period in which strikes, revolutions, and ill-timed legislation seem to be in order. The profession in Minneapolis is to be congratulated upon its prompt action, and its prevention of the renewal of any discussions of this sort.

Physicians, as a rule, are human beings, and they look at their patients from a humanitarian point of view, and refuse to be led or driven to a wavering of their duties to people who are ill and in need of their services. This again recalls the possibility of a strike among physicians, and is clearly illustrated in what was done in Yorkshire, England, as set forth in the *Journal of the A. M. A.* It seems that the miners had been on a strike in that part of England, and when two of them appeared in an out-patient department the medical officer on duty informed them that he was on a strike, too. Subsequently he offered to prescribe for them, but they refused on the ground that they had been insulted. When a medical man is without coal in his house, due to the fact that the miners have refused to work, he can hardly be expected to sympathize very keenly with a striking miner, and particularly one who asks gratuitous aid at a hospital. The miners, however, were peeved, and asked for an inquiry into the conduct of the medical staff, and by this time they have doubtless gotten it, and are probably suffering from the jeers of a watchful and discriminating public.

BOOK NOTICES

ROENTGENOTHERAPY. By Albert Franklin Tyler, B.Sc., M.D., Professor of Clinical Röentgenology, John A. Creighton Medical College; Attending Röentgenologist, St. Joseph's Hospital, Bishop Clarkson Memorial Hospital, Ford Hospital, Immanuel Hospital, Douglas County Hospital, and Lord Lister Hospital, Omaha, Nebraska; Member American Röentgen Ray Society; Fellow American Medical Association, etc. With 111 Illustrations. St. Louis: C. V. Mosby Company, 1918.

As a book for beginners this volume is quite worthy of consideration. As such it necessarily omits much that is desirable in technic. It will, however, be found useful for such readers. —C. A. DONALDSON

PSYCHIATRIC-NEUROLOGIC EXAMINATION METHODS. By Dr. August Wimmer. Authorized translation by Andrew W. Hoisholt, M. D. St. Louis, Mo.: C. V. Mosby Company, 1919. Price, $2.

This is a compendium and guide for use in making psychiatric-neurologic examinations.

In several places are found short introductory presentations of the normal psychologic or anatomophysiologic data, which help to better understand the diseased disturbances.

As the time given to this branch of medicine is very limited, this outline of examination should recommend itself to all students and to physicans in general.

—B. W. JARVIS.

THE SURGICAL CLINICS OF CHICAGO, Volume III, Number 1 (February, 1919). Octavo of 236 pages, 75 illustrations, Philadelphia and London: W. B. Saunders Company. 1919. Published Bimonthly. Price, per year: paper, $10.00; cloth, $14.00.

This is a most interesting number of these clinics, which have become so justly popular with physicians

that it is only necessary to state that in this number is given Dr. Victor D. Lespinasse's lecture to the members of the Dental Reserve Corps, U. S. Army, March 15 and 22, 1918. It is of greatest possible value to know the facts herein mentioned, when one wants to use them, especially in emergency surgery.

These clinics should be found in the library of every wideawake and progressive physician and surgeon. The other contributors are as follows: Dr. Carl Beck, Dr. Maurice A. Bernstein, Dr. Frederic A. Besley, Dr. Arthur Dean Bevan, Dr. J. S. Eisenstaedt, Dr. John R. Harder, Dr. Maxmillian John Hubney, Dr. Gustav Kolisher, Dr. Charles Morgan McKenna, Dr. Edward Louis Moorehead, Dr. Albert J. Ochsner, Dr. Edward H. Ochsner, Dr. Daniel A. Orth, Dr. George E. Shambaugh, Dr. Frank Edward Simpson, Dr. Kellogg Speed, Dr. Thomas J. Watkins. —A. A. Laurent.

A Text-book for Students and Graduate Nurses. By Archibald L. McDonald, M.D., of Johns Hopkins University. Published by Lippincott & Co., Philadelphia and London. 1919.

This book covers about 250 pages, dealing with the general principles of surgical diseases and the pathological changes which result, with outlined study of bacteriology.

The subjects discussed follow:

1. "Bacteria."
2. "Common Types of Local Infection Portals of Entry."
3. "Effects of Specific Pathogenic Bacteria."
4. "Tumors or New Growths."
5. "Wounds, Hemorrhage, Surgical Operations, and Anesthesia."
6. "Bones and Articulations."
7. "Vascular, Lymphatic, and Nervous Systems."
8. "The Head, Cranium, and Face."
9. "The Neck and Cervical Region."
10. "The Thoracic Cavity and Breast."
11. "The Abdominal Cavity, Walls, and Peritoneum."
12. "The Gastro-intestinal Organs, Stomach, Small and Large Intestines, Rectum, Anus, and Vermiform Appendix."
13. "The Liver, Bile-passages, Pancreas, and Spleen."
14. "The Urinary Organs, Kidney, Ureter, Bladder, and Urethra."

This work is of special interest only to nurses or to those who are interested in the care of the sick. The matter contained is presented simply, and has been made plain and interesting reading. No attempt is made to give other than general statements, which are sufficient for the function for which the book is intended.

A number of diagnostic drawings aid in explanation of the text.

The whole volume is well written, and is one which every nurse could well afford to have and study.

—O. W. Yoerg.

The Surgical Clinics of Chicago, Volume III, Number 2 (April, 1919). Octavo of 242 pages, 62 illustrations, Philadelphia and London: W. B. Saunders Company. 1919. Published Bimonthly. Price, per year: paper, $10.00; cloth, $14.00.

This number is full of interesting and practical things in Surgery, giving pointed descriptions with many clear illustrations.

A rich and varied clinic is presented by the following men: Dr. E. Wyllys Andrews, Dr. A. J. Ochsner, Dr. Truman W. Brophy, Dr. Carl Beck, Dr. Carl B. Davis, Dr. Thomas J. Watkins, Dr. Arthur Dean Bevan, Dr. Franklin B. McCarty, Dr. Victor L. Schrager, Dr. Benjamin F. Davis, Dr. Edward L. Moorehead, Dr. G. L. McWhorter, Dr. Daniel N. Eisendrath, Dr. Gatewood, Dr. Emmet A. Printy, Dr. Robert H. Herbst.

The subjects of fractures, particularly ununited ones, hare-lip, and abdominal surgery receive considerable attention.

Diseases of the genito-urinary tract come in for their share of attention, as do also prostatectomy, uterine prolapse, carcinoma of the larynx, etc.—C. P. Nehan.

Ultraviolet Rays in Modern Dermatology, Including the Evolution of Artificial Light-Rays and Therapeutic Technique. By Ralph Bernstein, M.D., Philadelphia, Pa., Prof. of Dermatology, Hahnemann Medical College, Philadelphia. Price, $2.00. Lancaster, Pa.: Achey & Gorrecht, 1918.

This book is the first one written in English devoted entirely to the ultraviolet ray, and its application in various dermatological disorders.

There is a good description of the Alpine sun and Kromayer lamps, the technique of their use, and brief discussion of the dosage, interval, and results in specific diseases.

There is no question that actinic therapy is established as a rational and safe type of treatment in various conditions. It is especially useful in acne of the indurated type, in certain types of "eczema," and occasionally in lupus erythematosus. The rays do not penetrate deeply, and permanent disfigurement, such as occurs in Röntgen misuse, does not occur. —H. E. Michelson.

The Hodgen Wire Cradle Extension Suspension Splint. St. Louis, Mo.: The C. V. Mosby Company. Price, $3.00.

Much attention has been lately directed towards efficient extension and suspension of fractures of extremities, with result that this small handy volume is a timely contribution. The exploitation of the Hodgen splint and its modifications, with comparison of different splints at present in vogue, meets with all the indications necessary for the proper treatment of this type of injury.

The book is very well written, clearly and concisely, so that any practitioner can easily adapt his requirements to the simple technic (well illustrated) embodied in this splint as described by the author.

Pages 93-95 clearly review the possibilities of this method of treatment. —F. H. Poppe.

What We Know About Cancer. A Handbook for the Medical Profession. Prepared by a committee of the American Society for the Control of Cancer. American Medical Associated Press, Chicago, 1918.

The American Society for the Control of Cancer has been in existence and working effectively for a number of years. The sole object of the society, at present at least, is the "dissemination of facts in regard to cancer to the end that its mortality may be reduced by a wider knowledge of the disease."

The effort represented by the present pamphlet has perhaps the most far reaching possibilities for good of any single attempt to lessen cancer mortality undertaken in this country.

It is no longer necessary to argue the point that delay is the one great factor in cancer mortality. At

least fourth-fifths of cancer deaths could be prevented by early recognition. The conditions necessary for recognition of cancer in ample time for cure are not ideal but distinctly practicable. Public education is one important pathway of improvement, but education of the medical profession itself is of equal if not greater importance. Statistical studies have shown that in the majority of cases the doctor has had the cancer patient "under observation" over a year before efficient curative treatment is instituted. It is needless to state that during this year the majority of cases have changed from curable to incurable. As the pamphlet itself somewhat mildly puts it, "The conditions call for a far keener appreciation of responsibility for the mortality from cancer than now generally exists in the medical profession."

It is not possible here to abstract this pamphlet which is already so condensed. The general facts concerning cancer are outlined and then each important type and site of cancer is taken up in detail and the forms, symptoms, standard treatment, and results to be expected are outlined for each type.

The chief point we would make here is that if every medical man would study and seriously apply the teaching in this pamphlet, which he can read in an hour, the question of delay in cancer would be solved in so far as it is referable to the medical profession. The ultimate possible good obtainable from the widespread dissemination of this pamphlet is so great that we would urge every possible means to get it into the hands of as many medical men of all classes as possible. It can be had from the American Medical Association, 535 N. Dearborn St., Chicago, for 10 cents. If you are a trained surgeon get it. It will interest you. If you are further afield get it and study and apply it. If you feel misgivings that some of your cases in the past might have been saved had you been more sure and acted more promptly (and who of us does not have such misgivings?) get it. It will help you in future cases.

We would especially beg the assistance of boards of health, both state and municipal, and of medical societies in distributing the pamphlet. It can be bought cheaper in quantities and sent out with your other mail matter with almost no extra cost or trouble. When such a simple means for such far reaching good is in our hands it is a pity to let it lie neglected.

GERIATRICS: A TREATISE ON SENILE CONDITIONS, DISEASES OF ADVANCED LIFE, AND CARE OF THE AGED. By Malford W. Thewlis, M.D., Associate Editor Medical Review of Reviews, New York City. Introduction by A. Jacobi, M.D., LL.D., and I. L. Nascher, M.D. Pp. 250. C. V. Mosby Company, St. Louis, 1919.

This small volume in its plea for more consideration for the aged is perhaps most needed by the younger physicians. The fact that, as the author states, "the physician's endeavors must end in ultimate failure," will always have a deterring influence on the efforts of energetic physicians. For this reason alone Geriatrics will never be an attractive specialty.

Further: the book has in it many helpful and practical hints as to the care of the aged easily accessible when wanted, but there is little of anything new relative to diagnosis or therapeutics.

Geriatrics will stimulate more sympathy and consideration for the aged on the part of the profession at large rather than the development of this subject as a special branch of medicine. —H. R. SMITH.

CEREBRO-SPINAL FLUID IN HEALTH AND DISEASE. By Abraham Levinson, B.S., M.D. St. Louis, Mo.: C. V. Mosby Company, 1919. Price, $3.

The author has given us a comprehensive study of the subject in all its phases. A short and interesting chapter on the history is followed by a discussion of the anatomy and physiology, and chapters on methods of obtaining the fluid, properties of normal and pathologic fluid, methods of examination for diagnostic purposes, cerebrospinal fluid in various diseases, and intraspinal treatment.

While the book of necessity contains much that is technical, the busy practitioner can find here quickly what he desires to know, and the knowledge of the simpler methods of diagnosis and the interpretation of results, together with the treatment outlined, makes the book of value to every physican.

—B. W. JARVIS.

NEWS ITEMS

Dr. Gilbert Knitrud has moved from St. Paul to Rochester.

Dr. H. T. Sherman has moved from Minneapolis to Franklin.

Dr. H. P. Miller has moved from Minneapolis to Hamilton, Ohio.

Dr. N. T. Owen has moved from Lead, S. D., to Rapid City, S. D.

Dr. N. B. McLean has moved from Kenmare, N. D., to Crosby, N. D.

Dr. Blake Lancaster has moved from Crosby, N. D., to Sherwood, N. D.

Dr. W. A. Kriesel has moved from Watertown, S. D., to Rosalie, Neb.

Dr. J. P. Miller has moved from Mandan, N. D., to Grand Forks, N. D.

Dr. Gottfried Schmidt, of Lake City, has been doing postgraduate work in Chicago.

Dr. W. T. Stone has moved from Wolverton to Herman, both places in Minnesota.

Dr. C. I. Spannare, formerly of Park River, N. D., is now located at Milton, N. D.

The Red River Valley Medical Society held a quarterly meeting last month at Crookston.

Dr. George W. Dewey, of Fairmont, has returned from France, and resumed practice.

Dr. B. S. Adams, of Hibbing, has been elected a member of the American College of Surgeons.

The nurses of Kalispell, Mont., have organized a "union," and fixed the "fee bill" at $35 a week.

Wykoff is again without a physician, and the loss is seriously felt. Wykoff is a village of 500 people.

Dr. C. R. Keene has resigned as head of the Department of Hygiene in the Minneapolis public schools.

Dr. E. C. Roos, of Chicago, has joined the staff of the Peabody Hospital Clinic of Webster, S. D.

Dr. T. F. Hammermeister, of New Ulm, has been doing postgraduate work in surgery in New York.

Dr. J. M. Caldwell, who has practiced over a dozen years in Wimbledon, N. D., has moved to Bemidji, Minn.

Dr. F. W. Ferguson, of Drayton, N. D., has become associated with Dr. W. C. Fawcett, of Starkweather, N. D.

Dr. A. F. Bratrud, formerly of Grand Forks, N. D., is now located in Minneapolis, with offices in the Masonic Temple.

Dr. J. Fowley Avery, of Minneapolis, is at home from Honolulu, where he has been since April in army hospital work.

Dr. G. S. Frogner, of Mayville, N. D., has been doing postgraduate work in the Laboratory of Surgical Technique in Chicago.

Dr. George L. Riley, who has practiced a short time in South Dakota, has located in Grand Rapids, Mich., to do hospital work.

Dr. Dale, of Rugby, N. D., is attending the practice of Dr. Dolan, of Willow City, N. D., who is laid up with a broken ankle.

Dr. Henry W. Stevens, of Anaconda, Mont., died last month at the age of 57. Dr. Stevens had practiced in Montana thirty years.

Dr. C. A. Rathburn has moved from Rice to Sauk Rapids. Dr. Rathburn was with the army in France until the armistice was signed.

Dr. G. H. Luedtke, of Fairmont, has returned from army service, and is in search of an office in Fairmont in order to resume practice.

Dr. A. R. Haskell, of Minneapolis, who has been in army service in France, has formed a partnership with Dr. J. R. Westaby, of Clark, S. D.

Drs. H. J. Lloyd and C. C. Pratt, of Mankato, have returned from army service, and resumed work in the Holbrook-Sohmer Clinic. The practice of Dr. Lloyd is limited to internal medicine, and that of Dr. Pratt to bacteriology and pathology.

Dr. Merton Field, who recently located at Northfield, as announced in these columns, will confine his practice to eye, ear, nose, and throat work.

Dr. F. G. Folken, of Omaha, Neb., has entered into partnership with Dr. H. D. Burns, of Albert Lea, under the firm name of Drs. Burns & Folken.

Dr. T. G. Thompson, of Sioux Falls, S. D., has resumed practice after two years' service in the army, one year in this country and one year in France.

Dr. W. G. Smith, of Hettinger, N. D., suffered the loss of his entire library, his surgical instruments, and his entire office equipment, by fire last month.

Dr. T. S. Paulson, of Fergus Falls, has gone to New York for postgraduate study in eye, ear, nose, and throat work. He will return to Fergus Falls in January.

Dr. R. M. Irwin, of Portland, Oregon, has moved to Mandan, N. D., and become associated with Dr. Geo. H. Spillman, whose partner, Dr. Martin Kranz, died last month.

The annual meeting of the Minnesota Health Association will be held in St. Paul next week, Wednesday, Nov. 5. Eighty county societies of the state will be represented.

Dr. Kenneth Taylor, a graduate of the Medical School of the University of Minnesota, and formerly of St. Paul, has become an instructor in Columbia University, New York.

An unusual number of Northwestern medical men seem to have gone to New York last week to attend the Clinical Congress of Surgeons and the American College of Surgeons.

Dr. E. A. Meyerding, director of the Division of Hygiene in the St. Paul schools, recommends to the Board of Education that more open-air schools be established in St. Paul.

We hope to be able to publish in our next issue the program of the annual meeting of the Southern Minnesota Medical Association, to be held in Mankato on December 1 and 2.

Many of the members of the former Brown-Redwood County Society, whose charter was revoked, have expressed their intention to join some other society or to form a new one.

"Health Bonds" are to be sold as a substitute for Christmas Seals by the Minnesota Public Health Association. The bonds will be issued of fifty and one hundred dollar denominations.

The Medical School of the University of Minnesota has 163 graduate students, of whom 138 are working in Rochester under the Mayo Foundation and 25 at the University in Minneapolis.

Dr. E. R. Thuerer, of Billings, Mont., after over a year's service at Camp Grant, Camp Taylor, Walter Reed Hospital, and the Rockefeller Institute, has returned home and resumed practice.

Dr. Hubert Van De Erve, who formerly practiced in Carrington, N. D., has returned from the service, and will locate again in Carrington as a member of the firm of Drs. McClusky & Matthaei.

Abbott Hospital, of Minneapolis, has received a gift of $100,000 from Mr. T. B. Janney, a highly reputed merchant of the city, the money to be used for an addition to the hospital for the care of children.

Two western states (Arizona and Nevada), two Central (Iowa and South Dakota), and two Eastern (West Virginia and Delaware) are all the states that will not adopt the model law for the registration of births and deaths.

Dr. Leo M. Maguire, who formerly practiced in Montana, has returned from the service, and located in Minneapolis with offices in the Masonic Temple. Dr. Maguire was decorated by King Albert of Belgium for gallantry in action.

Dr. Charles E. Smith, Jr., of St. Paul, who has been the assistant secretary of the State Board of Health for the past few years, and acting secretary since Dr. Bracken resigned, was elected secretary at the meeting of the Board last month.

The Watertown (S. D.) District Medical Society met at Watertown last month. Papers were read by Dr. H. W. Sherwood, of Doland, on "Alcohol; Its Uses and Abuses"; and by Dr. H. M. Freeburg, of Watertown, on "Emergencies in Obstetrics."

Dr. R. F. McHugh, formerly of Coleraine, has returned from France, and has decided to locate at Aitkin. He speaks highly of the courtesy of the physicians of Aitkin when he called upon each of them, and made known his decision to locate there.

The Board of Health of the City of New York has passed a resolution "prohibiting noise from bells and gongs which shall disturb the quiet or repose of persons in the vicinity thereof, to the detriment of the repose of health of such persons." Why not elsewhere?

The asset of the World War to American medicine, as set forth by Dr. George Douglas Head in his presidential address to the Minnesota State Medical Association last month, is attracting wide attention, and is liberally quoted by both the city and the country press of the Northwest.

Twenty-six hospital internes, who must be graduates of recognized medical schools, are wanted by the United Public Health Service. Competitive examinations will be held by the Civil Service Commission for eligibles on November 19 in 560 cities. A word to the sharks is sufficient.

While the printers' strike in New York delayed or prevented the issue of considerably over one hundred periodicals, the strike in Seattle affected practically all the weekly and monthly papers of that city. The *Medical Record* in New York and *Northwest Medicine* in Seattle were among the medical journals affected.

The name of another North Dakota physician who was a major in the Medical Service of the war, has been sent to us with some surprise by our correspondent that it was not in either list published. The major referred to is Dr. B. S. Nickerson, of Mandan. Our "surprise" correspondent furnished the first list.

The action of the Minnesota State Board of Health against a Winona physician for failure and, indeed, for refusal, to report venereal diseases, was taken only after several notices of the requirements of the law had been given. The plea of guilty, resulting in a fine, should be a warning to all physicians in the state.

Dr. Angus MacDonald, of St. Paul, died on October 11 at the age of 76. Dr. MacDonald was a graduate of McGill, class of '63, and came to Minnesota in pioneer days. He practiced in St. Cloud as a partner of Dr. A. E. Senkler, now also of St. Paul. Dr. A. E. MacDonald, of Minneapolis, is one of three sons now living.

The secretary, Mrs. Nora C. Little, of Chicago, of the American Medical Liberty League, has been lecturing in the Twin Cities. She and her league consider medical liberty equal to Christian liberty; and who doesn't? We presume her services can be had for the asking, and therefore we give our readers the benefit of this information.

The Winona county physicians have advanced their fees, and adopted the following scale: office consultation, minimum, $2.00; day visits, in

village or city, $3; night visits, between 9:00 P. M. and 7:00 A. M., $4; country visits, $1.50 per mile, with a minimum of $4.50; obstetrical cases, minimum, $25, with country mileage extra; tonsillectomy, $35; abdominal operations, minimum, $100.

Sioux Falls, S. D., has planned a city health department which promises to accomplish something worth while. Dr. W. F. Keller is at the head of the department, and is a member of the City Commission of three who will direct the work. Dr. I. P. Hollingsworth, of St. Paul, a bacteriologist, has been employed as assistant at a salary of $3,600, and will have active charge of the health work.

The twelfth annual meeting of the Minneapolis, St. Paul & Sault Sainte Marie Railway Surgical Association will be held at the Hotel Radisson, Minneapolis, Minn., December 8 and 9. An excellent scientific program is in the course of preparation and the prospects are for the most successful and largest meeting in the history of the Association, which can be justly termed a Victory Meeting.

In a news item in our issue of September 15th we stated that three Williston (N. D.) medical men saw service in France, namely, Drs. C. S. Jones, F. W. MacManus, and H. T. Skovholt. We are now informed that Dr. MacManus was not sent abroad, but served in this country, as did also Dr. L. B. Dochterman, of Williston, thus giving this small city the honor of sending four physicians to the service.

Free venereal clinics are to be found in the following places: *Minnesota,* in Duluth (Dispensary of St. Mary's Hospital); in Minneapolis (separate clinics for men and women in the City Hospital, and a clinic for men and women in the University Dispensary); in St. Paul (City Dispensary; *North Dakota,* in Fargo (City Clinic), and in Minot (City Clinic); *South Dakota,* in Aberdeen (Venereal Disease Clinic); *Montana,* in Billings (City Clinic); in Butte (City Clinic).

The thought behind the tube—

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Not "good enough" but the best from every standpoint—alone assures that degree of "Catgut Safety" demanded when the patient on the table is "ONE OF MY OWN FAMILY."

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The grains are sealed in guns, then rolled for an hour in 550 degrees of heat. Thus the moisture in each food cell is changed to steam.

Then the guns are shot. Over 100 million steam explosions occur in every kernel. All the food cells are blasted. The grains are puffed to bubbles eight times normal size.

The result is whole wheat, whole rice and corn hearts supremely fitted for digestion.

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PUBLISHER'S DEPARTMENT

SALVARSAN AND NEO-SALVARSAN

The Beebe Laboratories, of St. Paul, now sell salvarsan and neo-salvarsan at prices quoted in their card on another page, and they also furnish free, when requested, sterile and re-distilled water with the neo-salvarsan.

The Beebe Laboratories furnish the real chemical, not substitutes, and with every order goes the absolute guarantee of the Laboratories that the physician is getting just what he orders. A guarantee of this kind is worth while because it is a real guarantee.

THE WAUKESHA SPRINGS SANITARIUM

The Waukesha Sanitarium is devoted exclusively to the care and treatment of nervous cases. Its superintendent, Dr. Byron M. Caples, is a recognized authority on this subject, and he has placed his institution among the best in the land.

The environment of the patient in this institution is half the battle of treating his disease, and the personal element is what the superintendent has made it by large experience and by his own ability and character.

Dr. Caples will be glad to furnish any desired information concerning the work of the Sanitarium.

CAMPHO-PHENIQUE

The qualities of Campho-Phenique which, according to its manufacturers, recommend it to the profession are, that it is a germicide which is superior in real germicidal qualities to most preparations of the kind; that it is positive in effect; that it is uniform in action and economical; that it is unexcelled as a first aid dressing; and that it is an ideal dressing for all surgical wounds.

The Campho-Phenique Co., of St. Louis, Mo., will furnish any physician or surgeon ample free sample, and will give positive guarantees that their product produces all the effects claimed for it.

COLDS AND INFLUENZA

The late Theodore Roosevelt once said that this world could not be considered a fit place for any one to live in if it was not a fit place for all to live in. It must be apparent that the prevention of the "common" or recurring cold, and that type of coryza generally designated "grip" or epidemic cold, would go a long way toward making this old world a more livable place.

It is in the early fall months that these maladies are most prevalent. Recurrences of influenza in various sections of the country have been predicted for the fall months. The outbreaks will naturally follow in the wake of, or in the point of incidence be simultaneous with "common colds." The benefits of prophylactic vaccination for the public should therefore be urged by physicians and health officers. The organisms concerned in the symptoms and making up the "malignant symbiosis" of influenza are the same as those responsible for the infections with which we are more familiar and from which we are never free. To build up the individual's resistance against these organisms is rational, since it is the complications of influenza which make this, one of the least fatal of all diseases, one of the most fatal.

It is reported by the Lilly Laboratories at Indianapolis that the demand for its Influenza Mixed Vaccine is increasing materially. This product is especially applicable for the prophylaxis and treatment of influenzal conditions, inasmuch as the organisms entering into its composition were isolated from ante and post mortem cases of influenza from all sections of the country during the epidemic of last winter.

THE CREWE SANITARIUMS

Dr. J. E. Crewe conducts two sanitariums at Rochester, Minn., one devoted to the intensive treatment of tuberculosis, and the other to the dietetic and hygienic treatment of chronic diseases of metabolism, the intensive milk diet being given under certain conditions.

While these institutions are a long way apart and are wholly distinct, the idea of treatment in each is the gradual restoration of the patient to health along natural lines, that is, the gradual return of the patient's strength.

Dr. Crewe is doing an admirable work without going to extremes along untrodden paths.

Reprints of his articles published in medical journals are well worth sending for, and will be furnished to any applicant.

THE SWEDISH HOSPITAL OF MINNEAPOLIS

The Swedish Hospital of Minneapolis possesses in an unusual degree the two things that make a good hospital and guarantee its growth and healthful development. There is a capable, indeed a superior, superintendent and a uniformly strong staff,—not a few brilliant surgeons and some indifferent and poor men. We are inclined to think that the excellent management of the Swedish Hospital under Supt. G. W. Olson has brought to its staff not a few of its best men.

The laboratories of this hospital are unexcelled in the Northwest, and they have done much to aid in the diagnoses of all the difficult and rare cases that come to the hospital.

The Training School of the hospital is admirably conducted, and is, especially in these days, a valuable asset.

The rates of hospital are kept at lowest possible point without the sacrifice of efficiency and excellent service.

TROPHONINE

The name of Reed & Carnrick is one of the oldest and most honorable known to medical men of the present and the past generation. The house has given the medical profession some of the best products of the laboratory, some of which they themselves have marketed and some have been marketed by other houses.

Trophonine is one of the best of their products. It is a delicious food for the sick. It possesses a high caloric value and is rich in vitamines. It is a concentrated food that supplies all the essential food elements in an easily digestible form. It carries the patient over that critical period between the severe stage of sickness when the digestive organs refuse to act or rebel against food and the convalescent

stage when the patient is on the way to almost certain recovery, and yet needs watching lest a reaction in the digestive tract occurs.

Trophonine is the ideal liquid food for the sick patient.

PNEUMO-PHTHYSINE

In our notice of the commercial exhibits at the meeting of the Minnesota State Medical Association last month, we overlooked the exhibit of Pneumo- no other recommendation than its formula if such formula is read by an educated physician. The formula reads as follows: "Guaiacol, 2.6; formalin, 2.6; creosote, 13.02; quinine, 2.6; methyl salicylate, 2.6; glycerine and aluminum silicate, qs. 1000 parts; aromatic and antiseptic oils, qs."

This constitutes a local application of unquestioned excellence, and is unexcelled for endermic medication. If the constituents of the formula have a place in therapeutics, then Pneumo-Phthysine has a place in the armamentarium of the physician.

The principal claim for Pneumo-Phthysine is that it removes the excess of fever when absorbed by the skin. It is manufactured by the Pneumo-Phthysine Chemical Co., of Chicago, represented in the Northwest by Mr. F. A. Upsher Smith, of 2002 Iglehart Ave., St. Paul.

AMERICA'S UNIQUE PUBLICATION

The Youth's Companion prints week after week the best of everything that is worth while and for every age. No other source will give your family what The Companion furnishes, or so much for the price—less than 5 cents a week.

The Companion creates an atmosphere of loyalty to the family and to the country, of unselfishness and high purpose. It inspires, it suggests, but always entertains. It makes actual, normal life fascinating, and never panders to the trashy or worthless or worse.

No family should miss the pleasure of reading the delightful serial stories by Elsie Singmaster, Capt. Theodore G. Roberts, and others, to be published during the next year. If you subscribe at once you will receive all the extras mentioned in the following offer:

New subscribers for 1920 will receive:

1. The Youth's Companion—52 issues in 1920.
2. All remaining weekly 1919 issues.
3. The Companion Home Calendar for 1920.

   All the above for $2.50.
4. McCall's Magazine for 1920, $1.00—the monthly fashion authority. Both publications for only $2.95.

Address The Youth's Companion, Commonwealth Ave. & St. Paul St., Boston, Mass.

AN INVESTMENT OPPORTUNITY FOR PHYSICIANS

The Western Chemical Co., of Hutchinson, Minn., has been one of the notably successful enterprises dealing with physicians with a success based wholly upon the merit of its product and the honesty of its management. This Company manufactures, primarily, the staple drugs in an attractive and palatable form, thus making its principal product always a staple. It is also going with the manufacture of certain "proprietaries," which yield a large profit and yet soon become staples because of their excellence.

The enormous increase in the Company's business compels its location in a business center, and it has therefore decided to come to Minneapolis; and this increase of business and the building of a new and up-to date plant demand larger capital.

The Company has increased its capital stock to $300,000, and offers participating preferred stock to physicians on very attractive terms and under the authorization of the Minnesota State Securities Commission.

Its announcement is made on another page of this issue.

KEEP THE HOME FIRES BURNING

Before the war the United States was dependent on foreign sources, chiefly German, for supplies of chemicals, dye stuffs, drugs, optical glass, chemical porcelain, surgical instruments, and scientific instruments of several sorts. Until importations stopped, we did not fully realize our helplessness and weakness. Now we know how and are resolved to make at home, all the things which, before August, 1914, we had to have from Germany or go without. As Secretary of Commerce, Redfield says, "We should never again find ourselves in the position that developed in the early part of the war, where needing many things, we found ourselves making almost none."

The making of medicinal chemicals is an essential industry both in peace and war. The United States has the materials, and the scientific knowledge, the equipment and the capacity to compete with the best medicinal products of foreign manufacture.

The U. S. Federal Trade Commission and the Chemical Foundation are making it possible for American manufacturing chemists to produce, in this country, those products which, until the war, were controlled in Germany.

Among those products are Barbital, introduced as Veronal, Procaine, introduced as Novocaine, and Cinchophen, introduced as Atophan.

The Abbott Laboratories of Chicago has done splendid pioneer work in producing these and other products used by the medical profession and hospitals. If made worth while, they can always find the fuel to keep the home fires burning.

Booklet giving indications for, and dosage of Cinchophen will be sent on request to The Abbott Laboratories, Chicago.

THE
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REPORT OF A CASE MADE BY A DIAGNOSTIC CLINIC

For an explanation of this paper and extended comment upon it, see our editorial columns.—The Editor.

Dear Doctor: In regard to your patient, Miss ——, whom you referred to the Diagnostic Section of —— hospital on August 6, 1918, and whose complaint is "pain and tenderness in right hip; backache," we beg to state that two conditions are found upon examination, both of which are important to consider: first, her back condition, which in a large measure explains her complaint, the orthopedic diagnosis being Sacro-iliac Dysfunction, more often called Relaxation; and, second, a hypertonic colon with constipation. The colon in the region of the appendix is especially tender, and the suggestion of a chronic appendix cannot probably be ruled out.

The following is the complete report of history, findings, diagnosis, and recommendations for treatment:

GENERAL ANAMNESIS by —, R. N.

Patient is an American girl of 21, single, no occupation, walked into the hospital, is 5 ft. 9 inches in height, and weighs 126½ lbs. Her habits are negative.

Family History: ? Cancer; Tuberculosis; Bright's Disease.

Past History: Measles; mumps; pertussis; scarlet fever; tonsillitis; two falls.

Present Illness: For about four years patient has noticed a backache and an aching in the right hip. She thinks that her back has always been weak and subject to "backache." During the past four years the aching has been intermittent (in the hip), but it has increased during the last year and a half. Walking or standing increases the distress. For some time there has been a localized tender spot in the right hip region, and, more recently, she has occasional sharp pain from the lumbar region into the hip-joint. She is unable to swim on account of its causing backache and hipache. She treated for about three months, a year and a half ago, with a chiropractic. This treatment seemed to relieve her and strengthen her back. Standing, walking, or excitement increases her pain. Her right leg and hip and occasionally her right arm feel numb and prickly. Recently she has had pain in the occipital region, especially in the right side. She seems to be able to sleep comfortably on the right side. Certain positions, such as stooping, etc., cause a feeling in the hip as though it had slipped out of joint. She can also hear a "pop." Pain is increased during catamenia (a pulsating feeling). She is unable to use the right leg as freely as the left.

DEPARTMENTAL SYMPTOMATOLOGY

Dermatology: negative. *Skeleton:* present illness; ankles sore.

Neurology: occipital headaches; numbness and prickling in right side with present illness. *Digestive:* dental work; canker sores; stomach disorder with catamenia (gas, belching, vomiting bile occasionally). Slight constipation. *Cardio-vascular:* cold hands and feet. *Respiratory,* negative. *Special Senses:* tonsillitis. *Genito-urinary:* distress and pain occasionally after micturition; pain in lumbar region. *Gynecology:* menses regular, profuse; pain at onset; backache. *General Surgery:* present illness. *General Medicine:* present illness.

DEPARTMENTAL PHYSICAL EXAMINATIONS

Well developed, undernourished young woman of twenty-one; intelligent and moderately well educated; does not appear ill.

Dermatology (Dr. —) : skin dark; normal tone and texture; no dermographia nor glands; clammy hands and feet; herpes lower lip; hair dark, excess sacrum and legs; dandruff.

Skeleton (Drs — —) : carnivorous type; back very rigid in hyperflexion; rotation only above 3d lumbar vertebra. Point tenderness from the sacro-iliac synchondrosis around to great trochanters; rigid spine from 12th dorsal to sacrum; tender along tibia shaft; hypotonia back muscles; slight pronation feet and moderately low arch.

Neurology, negative.

Digestive (Dr. —) : tender palpable colon.

Cardiovascular (Dr. —) : heart, normal size; regular pulse; arteries negative.

Respiratory (Dr. —) : thin flat chest; findings negative; tuberculin reaction negative.

Special Senses (Dr. —) : slightly reddened pharynx; slight astigmatism; eye backgrounds, negative; vision, 20-20; ears, negative.

Genito-urinary (Dr. —) : general tenderness over right kidney.

Gynecology (Dr. —) : margin of urethra edematous. Rectal examination: uterus body, normal size and position; pulling cervix to the left causes some pain in region of right sacro-uterine ligament; smear taken from reddened vulvovaginal ducts; dilated anal veins.

General Surgery (Dr. —) : tender in right lower quadrant; tender fasciæ, occipital region.

X-ray (Dr. —) : teeth, negative; sacro-iliacs, negative; anatomical variation lower lumbar vertebræ; chest, negative; gastro-intestinal: stomach, low, 2°, without defect in outline; colon, hypertonic and small.

Pathology (Dr. —) : blood, hemoglobin, 97 per cent; erythrocytes, 4,300,000; leucocytes, 10,200; polymorphonuclears, 72; lymphocytes, 24; monomorphonuclears, 4. Widal and Wasserman, negative.

Urine: single specimen, trace of albumin; moderate amount of indican; night 12-hour specimen, 750 c.c.; specific gravity, 1022; phthalein, 65+10; day amount, 200; night amount, 400 c.c.

Stool, formed, greenish; occult blood; no mucus.

Sputum, none.

Vaginal Smear, negative; no Neisser.

Stomach Analysis: fasting contents, 70 free; acid curve irregular, highest point at 1½ hours, 100 free HCl; remained practically at this point up to two hours when stomach was empty. Bile appeared towards the last; one specimen showed occult blood.

Hospital Course: Temperature, 98.2°-100.6° (R); pulse, 72-120; respiration, 17-20; blood-pressure, 118 mm. Hg. systolic and 70 mm. Hg. diastolic. Drug tests were made for the physicochemical system, and are recorded in the protocol. Patient complained of severe headache while in the hospital.

CLINICAL DIAGNOSIS

Sacro-iliac relaxation. Gastroptosis. Chronic toxemia, due to—(a) constipation with hypertonic colon; (b) appendicitis; (c) slight pharyngitis. Causing—mild toxic nephropathy; vagotonia; hyperthyroidism.

Hemorrhoids.

Slight astigmatism.

Slightly pronated feet.

DIFFERENTIAL DIAGNOSIS

Gastro (Dr. —) : This patient has constipation, and the examination reveals a palpable, tender spastic colon. The question of a chronic appendix was considered, but the widespread tenderness and the spasticity of the colon are against this being a localized lesion.

THERAPY

Sacro-iliac Relaxation: A carefully fitted Brackett brace.

Gastroptosis: Proper support which will be obtained by brace mentioned above.

Constipation with Hypertonic Colon: Colonic irrigations, viz., 6 oz. of salad oil by rectum every night (knee-chest position) to be retained, followed in the morning by salt and soda colon irrigation, also in knee-chest position; tr. of nux vomica, beginning with M. X., t.i.d. a.c., and increasing M. V. every day until patient is taking from 40 to 60 minims t.i.d. Tr. of belladonna, M. X., t.i.d., p.c., increasing M. V. daily until patient's tolerance is reached.

Diet should be mild and non-irritating and not too rich in starches.

Appendicitis: Observation. If symptoms persist, appendectomy should be considered.

Slight Pharyngitis: None at present.

Mild Toxic Nephropathy: Prevent toxic absorption by clearing up foci of infection.

Vagotonia: Prevention of toxic absorption. Atropin or some of its derivatives to physiological limit as a palliative measure.

Hyperthyroidism: If the clearing up of focal infections does not improve this condition, then *x*-ray irradiations to thyroid are indicated.

Hemorrhoids: Clearing up the constipation will probably alleviate this condition.

Slight astigmatism should be corrected by properly fitting glasses.

Slightly Pronated Feet: Arch supports.

DEPARTMENTAL DISCUSSION

Pathology (Dr. —): Laboratory examinations show little of interest in this case aside from a moderate indicanuria. This finding is probably a part of the gastro-intestinal disturbance. In our experience, indican is a very common finding where there is constipation or other disturbances interfering with the digestive metabolism. Indicanuria frequently comes in attacks or is more marked at some periods than at others. Very frequently headaches are associated with marked indicanuria. This suggests that treatment of the intestinal tract in this type of case is an important matter.

Along with the indicanuria, however, is a marked hyperacidity not characteristic of any lesion, but suggestive of vagotonia, so commonly seen in intestinal disturbances, especially in mucous colitis or chronic appendicitis or irritative lesions in the upper abdomen. It is noted very frequently in gall-bladder disease. In this case, it is difficult to say how much the acid curve was influenced by the barium meal which was present in the stomach.

Röntgenology (Dr. —): A hypertonic colon is considered as a source of infection through putrefaction and absorption. Jas. T. Case, Battle Creek, Mich., classifies this condition according to location, such as pelvic, descending and transverse portions of the colon causing a dilatation of the cecum and ascending colon and a possible backward pressure into the terminal ileum. This last, however, is not a constant finding.

Dermatology and Endocrinology (Dr. —): While there is evidence of some early pineal dysfunction, the same does not require treatment and is of no present importance. The several thyroid symptoms indicate principally a hyperchange and, if not cleared up by removal of infections, *x*-ray irradiations to the thyroid would be indicated.

Blood and Circulatory System (Dr. — for Dr. —): The cardiac findings were normal throughout. The slight toxic nephropathy is secondary to the intestinal toxemia and proper care of the latter will clear up the condition.

Respiratory System (Dr. —): History, physical findings, and *x*-ray plate all showed negative findings in the respiratory division. The patient's aunt died of tuberculosis, but there was no contact history. The patient has a thin, flat chest with prominent subclavicular fossæ, which is of the type favoring tuberculosis.

Gastro-enterology (Dr. —): No general discussion.

Urologic Surgery (Dr. —): No discussion.

Orthopedic Surgery (Dr. —): In the history the expression "hip" refers to the pelvis, and the constant reference to pain and discomfort at the right side of the pelvis at a particular spot would make one immediately suspicious of a sacro-iliac dysfunction.

Physical examination reveals the fact that straight leg-bending causes increased discomfort in the right sacro-iliac joint. Also, when the patient stands up and attempts to bend forward while maintaining the knees straight, the same symptom is elicited. The "click" referred to has been noted by several colleagues as well as by the patient. The fact that she can lie comfortably in bed points away from our having to do with a traumatism of this joint. There can be no question, however, that we are dealing with a right sacro-iliac relaxation, or, as it is coming more generally to be called, dysfunction. There is no relation between the menstrual periods and increase of the discomfort beyond the fact that the whole nervous system seems to be more responsive to external irritation at that time.

The girl herself has a fairly classical feminine body, following, however, the so-called carnivorous, or mechanically relaxed, or inefficient type, —that is, the shoulders are somewhat forward, the chest slightly contracted, the lumbar curve sharp, the ribs descend steeply, the abdomen is pendulous, and the pelvis tipped forward to an increased angle with the horizon.

Such a patient should be benefited by posturing designed to expand the lower ribs, develop the abdominal muscle, make the lumbar curve more gradual, and, temporarily, by apparatus designed to grasp the pelvis and sacrum, firmly support the lower abdomen and take the carrying strain, produced by the viscera, from the lower back. The best application of this type is the so-called Brackett brace.

Gynecology (Dr. —): No general discussion.

General Surgery and Visceral Neurology (Dr. —): There is no surgical condition in this patient at present, though the question of a

possibly chronic appendix must be kept in mind. The tenderness in the right lower quadrant and the positive reaction from the leg-lifting test are both significant of that condition.

From the viewpoint of visceral neurology, it is the experience of Eppinger and Hess that mixed types,—that is, those with disturbances of both the autonomic and sympathetic systems,—are much more common than pure types of either group. This case is interesting from the fact that only in the drug tests does the patient manifest any sympathicotonia. Her symptoms and findings otherwise are purely vagotonic.

There are many commonly recognized factors causing disturbances of the vegetative system, such as gastric ulcers, appendicitis, gall-bladder disease, adhesions, chronic toxemia, etc. Outside of these factors, long continued nervous fatigue has been found to be an element; postural abnormalities, including the more pronounced cases of visceroptosis; obscure infections and disturbances involving the glands of internal secretion. We must conclude, therefore, that there is much in favor of correcting in so far as possible the disturbed functions incident to a ptosis of the visceral organs by posturing and proper exercises; and, also, a clearing up of the causes of the chronic toxemia will most probably have a palliative effect not only on the disturbances of the vegetative nervous system but on any dysfunction of the endocrine glands.

General Medicine (Dr. —): In this case there was a defect found by the Röntgen examination suggesting a spina bifida occulta. The spinous processes of the 5th lumbar were not joined posteriorly. There was no gap, however, the processes coming to the midline, one above the other. Lately, in the *American Journal of Medical Sciences,* April, 1918, Brickner has reviewed this subject. Up to 1910 he found 85 cases recorded in the literature. He says that in these the *x*-ray lesion was indicated externally most often by a distinct hypertrichosis over the cleft; somewhat less often by congenital lipoma symmetrically situated over the cleft; occasionally by a nevus, telangiectasis, or scar, or sometimes by a combination of these. It is most often found in the lumbar or lumbosacral regions, but usually involves only a few vertebræ. He says that mere hairiness in the lumbosacral region, which is noted in many individuals, is not distinctive of a spina bifida. Other spinal deformity may be present together with other congenital malformations. In some cases with symptoms, there is no hernia of the spinal cord structures. The symptoms arising from spina bifida occulta usually appear during adolescence or early adult life, but not rarely they develop during childhood and occasionally they first appear during middle life. The symptoms noted are incontinence of bladder or rectum, sensory paralyses, motor paralyses, disturbances of the reflexes, atrophic ulcerations, and gangrene.

In reviewing the literature of the *x*-ray findings, this writer states that defects in the lower spine region are very common and often apparently explain many cases of enuresis. Spiller, for instance, reported a case of enuresis increasing, and motor weakness and sensory disturbances developing, after moderate exercise, in which the röntgenogram showed a grave defect of the sacrum and lower lumbar vertebræ, the back appearing perfectly normal to sight and palpation. In looking over the röntgenograms of the lower spine in patients exposed for examination of the urinary tract, hip, etc., the writer has noted many anomalies, most often in the 5th lumbar, and gets the impression that it is not very uncommon, so that, perhaps, careful inquiry in some of these cases might show some signs of loss of bladder control or loss of thermal or tactile sensitiveness in the lower extremities, and he is prepared to believe that there is found in a certain proportion of healthy individuals a congenital defect of the lumbar or sacral arches without any affection of the spinal cord tissues.

This review is mentioned here as of possible interest in connection with the *x*-ray findings and that of the orthopedic report; also for the reason that visceroptosis and the general build of this patient are also along the line of congenital defects not very clearly understood as yet.

DIAGNOSIS AND TREATMENT

The following is a pathologic classification with cause and effect, together with argument for diagnosis and treatment:

Past infections as causes: measles, mumps, pertussis, scarlet fever, tonsillitis.

Chronic Toxemia—Active infections as causes:

a. *Constipation with Hypertonic Colon: F. H.,* negative; *P. H.,* contipation, gas. *Symptoms:* same. *Findings:* small hypertonic colon with pressure tenderness (*x*-ray); small amount of indican; tender, palpable colon. *Etiology:* bacterial. *Treatment:* routine enemata; nux vomica; belladonna.

b. *Appendicitis: F. H.,* negative; *P. H.,* con-

stipation and indigestion; vomiting; pain in right lower quadrant. *Symptoms:* same. *Findings:* tenderness in right lower quadrant (McBurney's point); leg-lifting test positive. *Etiology:* bacterial. *Treatment:* observation with possible operation if no improvement from above treatment.

c. *Slight pharyngitis: F. H.,* negative; *P. H.,* negative. *Symptoms:* none. *Findings:* slightly reddened pharynx. *Etiology:* bacterial. *Treatment:* none at present.

Effect:

a. *Mild Toxic Nephropathy: F. H.,* tuberculosis; *P. H.,* infections. *Symptoms:* none. *Findings:* trace of albumin in urine. *Etiology:* chronic toxemia. *Treatment:* clear up focal infections.

PHYSICOCHEMICAL SYSTEM

b. *Visceral Neurology:*

1. *Observation of Great Vagus (vagotonia): F. H.,* tuberculosis; *P. H.,* infections. *Symptoms:* abdominal pain; marble-like stools. *Findings:* large eyes, thick lips; high arch and palate; hypertonic colon; clammy hands and feet. *Drug tests:* pilocarpin, moderate diaphoresis. *Etiology:* chronic toxemia. *Treatment:* prevent toxic absorption.

2. *Observation of Sympathetic System (sympathicotonia): F. H.,* tuberculosis; *P. H.,* infections. *Symptoms:* none. *Findings:* drug tests; Loewi's test (adrenalin in eye); slight dilatation; adrenalin (H); nervousness; pulse increased from 88 to 120, glucose + adrenalin, 7 gms. of glucose. *Etiology:* chronic toxemia. *Treatment:* same as above.

3. *Endocrine Glands (dysfunction of):* Thyroid *(hyper):* nervousness; slight tremor; headaches; vomiting; slightly enlarged thyroid. *(Hypo):* loss of hair. Pineal *(hyper);* hypertrichosis. Pancreas *(hypo):* lowered sugar tolerance. Pituitary, thymus, parathyroid, adrenals, ovarian, normal.

Sacro-iliac Relaxation: F. H., negative; *P. H.* and *symptoms:* present illness. *Findings:* point tenderness from sacro-iliac synchondrosis around to great trochanters. *Etiology:* congenital. *Treatment:* Brackett brace.

Gastroptosis: F. H., negative; *P. H.,* constipation; indigestion; vomiting. *Symptoms:* same. *Findings:* stomach low, 2° without defect in outline. *Etiology:* congenital. *Treatment:* brace mentioned above.

Hemorrhoids: F. H., negative; *P. H.,* constipation. *Symptoms:* none. *Findings:* dilated anal veins. *Etiology:* developmental. *Treatment:* correct constipation.

Slight astigmatism: F. H., negative; *P. H.,* headaches. *Symptoms:* same. *Findings:* slight astigmatism. *Etiology:* congenital. *Treatment:* glasses to correct strain.

Slightly Pronated Feet: F. H., negative; *P. H.,* soreness in ankles. *Symptoms:* same. *Findings:* tender tibia shafts; low arch (moderate). *Etiology:* mechanical (back strain). *Treatment:* arch supports.

MYOMECTOMY VERSUS HYSTERECTOMY*

By E. O. Giere, M.D., F.A.C.S.
WATERTOWN, SOUTH DAKOTA

When attending the clinics, both in this country and abroad, one is impressed, among other things, with the marked difference in surgical procedures as they are conducted in these various clinics. Go to Berlin, and you will rarely witness an open operation for fracture. Go to London, especially to Guy's Hospital, and the open operation for fracture is a matter of almost everyday occurrence. Visit the clinics in our own country, and one is similarily impressed with the variance in surgical practice. In one clinic, for instance, every gall-bladder attacked is removed, while in another clinic simple drainage is the operation of choice. In one clinic you will be told that, if the gall-bladder is bad enough to be operated on at all, it should be removed, while in another clinic you will be given to understand that only marked pathology of the gall-bladder should constitute an indication for cholecystectomy. Again: Reading the medical literature at home as it comes fresh from the press, one may be led to believe that so-and-so is the most practical and convenient technic, and so-and-so is the accepted method of dealing with a certain pathologic condition. By visiting the clinics the very opposite is sometimes found to be the practice. How often, for instance, do we not read of the advantages of the beautiful transverse abdominal in-

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cision, as if this particular incision constitutes the most practical, if not the most natural, approach to the abdominal organs; but how rarely we see this incision practiced. I am reminded in this connection of a certain occasion when Dr. W. J. Mayo was operating for an appendical abscess, where the appendix formed a part of the wall separating the abscess from the peritoneal cavity, and he uttered this ironical, but significant, remark: "If I were writing a book now I should be removing this appendix, but as I am trying to save a life just now I shall leave the appendix at this time, and remove it later." When writing an article it is very easy, and perhaps tempting, to formulate broad principles of technic, but when in the act of surgical practice even the master surgeon must often confine himself to apparently very narrow principles. Attending clinics and studying medical literature both tend in the highest degree to develop the modern surgeon, but as individual experiences and opinions differ among surgeons in general, so every surgeon in practice must exercise his own individual judgment in the performance of the work before him. Horsely[1] sounds this same warning when he says: "If we could get away from blindly following what someone says merely because he says it, and do things because of reasons that have sound biological foundations, we should undoubtedly do work more satisfactory to our patients and to ourselves."

When reading the literature on the surgical treatment of myoma of the uterus, one may be led to believe that the proper operation to perform in dealing with these tumors is, as a broad and general rule, myomectomy. Kelly[2], for instance, says: "No more important advance can be made by the gynecologist in the immediate future than by extending the indications for myomectomy and narrowing the field of myohysterectomy, and so saving the uterus whenever possible." That in the young woman the uterus should be spared whenever practically possible, there can be no question. But should this principle be made the rule of practice in women past the age of forty or forty-five, when the uterus has outlived its usefulness and is no longer of any vital importance? The chief advantages held forth by myomectomy are, that menstruation is not interfered with, symptoms of artificial menopause are not invited, and pregnancy is not made impossible. These advantages all apply to the young woman only, and to her they are of decided importance; but not even here do these advantages measure up in importance with the advantages of no recurrence, greater comfort, and longer life. In the woman past the age of forty-five it is doubtful if myomectomy offers a single advantage over hysterectomy. On the other hand, myomectomy carries with it certain distinct disadvantages which must not be ignored, regardless of the age of the patient.

Myomectomy does not make recurrence impossible. Noble[3] quotes Engstrom and Winter as reporting 8 per cent of recurrences. Other authors report some higher and some lower per cent of recurrences.

Myomectomy does not always relieve the symptoms. I quote the following from Noble[4]: "Of 200 cases of radical operation [hysteromyomectomy] collected by Abdel, Burkhordt, and Schenk [quoted by Winter, loc. cit.], in 95 per cent the symptoms were fully relieved. In comparison: In 69 cases of myomectomy for submucous tumors, 27.5 per cent were not relieved. In 16 cases of subserous pedunculated growths, a recurrence of symptoms was noted in 35.5 per cent. In 11 cases of subserous interstitial tumors 45 per cent continued to suffer."

Myomectomy leaves possible the occurrence of malignancy. Olow[5], reviewing the experience at the gynecological clinic of the University of Lund, Sweden, found that 5.2 per cent of uterine myomas were complicated with malignancy. He makes this significant utterance that in the 359 cases included in this report cancer had not been diagnosed in a single case before operation, and had been suspected in only one case. Olow recommends total hysterectomy for myoma when practical, regardless of whether there is suspected malignancy or not.

Finally, it is generally conceded, and statistics prove it to be a fact, that myomectomy is followed by a higher immediate mortality than is the operation of hysterectomy. Myomectomy forms one of the exceptions to the rule that a conservative operation is accompanied by a lower immediate mortality than is a radical operation. Again I quote from Noble[6] the following: "Myomectomy is a more dangerous operation than hysteromyomectomy, as is generally admitted and as the following statistics show. Winter reports a series of 451 cases of abdominal myomectomy for subserous and interstitial growths, taken from the statistics of Hofmeier, Rosthorn, Martin, Olshausen, Schauta, Zweifel, and others, in which there was a mortality of 9.8 per cent, as contrasted with a mortality of 4.8 per cent for supra-

vaginal hysteromyomectomy. Kelly reports a mortality of 4.5 per cent in 306 myomectomies, as contrasted with a mortality of 3.1 per cent in 691 cases of hysteromyomectomy."

Hysterectomy, to be sure, puts a stop to menstruation; it may, or may not, bring about an early and a sudden menopause; it makes future pregnancies impossible; and it leaves the patient minus an organ of more or less importance. It does, however, bring about a relief of symptoms and a cure of the disease; it prevents recurrence, and guards against malignancy; and it does all this with a lower mortality following the operation than is the case with myomectomy, which, besides, offers much less substantial and lasting results.

Considering, then, the advantages and disadvantages of both operations it does not appear justifiable to make myomectomy the operation of choice as a general rule in dealing surgically with myoma of the uterus. Myomectomy, I believe, should be limited to patients in the child-bearing period; and the younger the woman the more urgent should be this particular operation, and, exceptionally, to women of any age where the tumor is single and pedunculated, provided there is a reasonable assurance that there may not be present small, undeveloped growths, and where malignancy can be ruled out beyond a question of doubt. Mayo[7] states it well when he says: "Hysterectomy has been and still is the operation of choice for all symptom-producing myomas, and it has much to commend it." In speaking of the practice at St. Mary's Hospital he says: "Myomectomy was not often done in those over forty, and it was not frequently done after the age of thirty-five unless the conditions were such as to make it safe. On the contrary, it was done for the majority of patients with myomas who were under thirty-five years of age and for practically all under thirty years." Robert T. Morris[8] puts it thus: "There is one important factor which we are apt to forget, and that is the patient herself. Ask her what she wants. I say to a patient who has these small masses: "If we do a myomectomy, remove a part of the uterus and leave a part, you will probably have a further development of neoplastic growths because the original conditions persist. If you want me to leave a part with the probability of having further neoplastic growths develop, with the idea of having a child, all right. I leave it to the patient."

In summing it all up I should say: Theoretically, myomectomy should be the operation of choice. Practically, hysterectomy must be the operation of choice in the vast majority of cases. Myomectomy should, as a rule, be limited to patients less than forty years of age. Hysterectomy should be practiced in practically every case above the age of forty, and in all cases below forty where myomectomy does not offer a safe and promising operation.

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DISCUSSION

Dr. T. F. Riggs (Pierre): The doctor has given us a very excellent paper, and his conclusions are sound. I think without question one hesitates to remove the uterus of a woman of the child-bearing age. Without doubt, to do a myomectomy you put the patient to greater risk than if you do a hysterectomy. I am not quite sure that I approve of leaving the choice entirely to the patient because no woman wants to have her uterus removed. I think one should explain to the woman the possibilities, but one should have a free hand when the abdomen is opened. One cannot stop and ask the patient what is to be done unless he uses local anesthesia.

In myomectomy the danger of intestinal obstruction comes from the position of the incision in the uterus and inability to cover it over as well as in a hysterectomy. There is danger of embolism; there is danger of toxemia, which may follow a myomectomy. You will have less toxemia following a hysterectomy than you will following a conservative Cesarean section. A typical, clean, hysteromyomectomy is, without question, much easier to do, and requires less skill than a myomectomy unless one has a simple pedunculated tumor to deal with. I agree fully with the essayist in the statement that so far as clear-cut lines can be drawn, there is no question with a patient above the age of forty what to do, but there is question with a patient during the child-bearing period. If there is a multiple condition I think, without question, hysterectomy should be done. If there is a single tumor, easily approachable, then a myomectomy is advisable if the patient is under thirty-five years of age.

Dr. R. L. Murdy (Aberdeen): I did not intend to enter into the general discussion of the indications for myomectomy, but the essayist brought out some points in his paper that are clearly defined and which we should understand when we assume the responsibility of a hysterectomy or a myomectomy.

I assume the essayist had in mind when he was speaking of myoma to include the pelvic causes of fibroids. Is that correct?

Dr. Giere: Yes, sir.

Dr. Murdy: That being true, we must use a little judgment about the type of operation that we select the same as we do in other things in medicine and in surgery.

We find quite a number of small fibroids of the subserous type that involve directly the muscular or fibrous tissues of the uterus, and there anything other than a myomectomy or the enucleation of these fibroids would be meddlesome and dangerous surgery, but for the type of fibroid or myoma that involves a large amount of uterine tissue, I believe the operation of choice is a hysterectomy. When we conclude we are going to do a hysterectomy, it is necessary that we also use some judgment as to the type of operation we are going to perform. If these patients are to be left in good condition, a type of operation must be chosen that will leave them with the least number of complications and obviate the danger of extensive adhesions of the viscera to the stump.

The essayist spoke of peritonealizing the stump in hysterectomy, and also said it was much more difficult to do in myomectomy. This is true in a measure, but there are a number of structures with surfaces that accommodate themselves to this particular type of operation in this locality. I refer particularly to the peritoneum of the bladder. There are very few of these cases in which the peritoneum of the bladder cannot be drawn over and incisions made if the uterus is perfectly peritonealized.

I would like to urge the type of operation where a hysterectomy is performed that insures a strong pelvic diaphragm. Many times we must accomplish more than the removal of the uterus for myoma. If these young patients have had an unhappy life before that, we must leave them in a good condition. The proper type of operation is one that secures the stump of the uterus and takes advantage of the broad and round ligaments. If you are going to have a prolapse of the stump and are going to have a prolapsus of the bladder, and then you are going to leave the parts in a worse condition than if no operation had been done, all, perhaps, for a harmless myoma. In this connection I would like to mention the fact that many of these fairly large myomas may be treated successfully by radiation. Some of the foreign operators have gone so far as to say that hysterectomy for fibroids is not necessary. I am not prepared to go that far, but I am prepared to go so far as to say that many of these conditions of the fibrohemorrhagic type, in which the patient has been brought into a very anemic condition and is a poor subject for operation, by radiation can have the hemorrhage checked, and you can bring the blood of the patient to practically normal, and get the patient in a good condition for operation and be able to make a good risk out of a poor one.

Dr. M. A. Stern (Sioux Falls): I think Dr. Giere has brought out all the points in reference to this subject very clearly. In a young woman one naturally hesitates to remove the uterus for many reasons. The chief reason one hesitates to remove the uterus is on account of the train of nervous symptoms that follow hysterectomy. Every patient who has undergone a hysterectomy has more or less pronounced nervous symptoms. I do not think that there is any doubt that, after forty years of age, hysterectomy is absolutely the operation of choice. I think it is understood by every one that myomectomy is merely a palliative operation, and you must expect at some future time to do a secondary operation.

There is one valuable thing that Dr. Murdy mentioned, namely, the *x*-ray treatment of fibroids. I think you can do practically all in the way of palliation with radiation that you can with a myomectomy. Of course, the two great symptoms that bring a woman to the doctor when she has fibroids are hemorrhage and a secondary increase in the size of the tumor. You can absolutely stop hemorrhage by radiation. There is no question about that, and you can also bring about a decrease in the size of the tumor or else make it remain stationary by proper radiation.

Kronig and Gauss, of Freiburg, were among the first to take this up to any great extent. They claim to have had excellent results in the treatment of fibroid tumors of the uterus only by the *x*-ray; in fact, they claim to have had good results in 100 per cent of cases of fibroid tumors of the uterus. Of course, this is a very broad and striking claim. In a book published by them they give reports of 350 cases, and they claim 100 per cent symptomatic cures,—that is, stoppage of hemorrhage and a decrease in the growth or size of the tumor merely by the use of the *x*-ray.

There is another agent that will do the same thing for us, and it is not hard to apply, and that is radium. You can do absolutely the same thing with radium that you can do with the *x*-ray, and do it better. Radium has been satisfactory in the treatment of these conditions.

I have had quite a little experience with the *x*-ray treatment of fibroids, and it has been highly satisfactory. At present I cannot recall more than two cases in which I was not able to stop hemorrhage, which is the main thing that brings these patients to the office. Bearing in mind that myomectomy is merely a palliative operation, it would be well to bear in mind also that we have in these agencies, the *x*-ray and radium, fully as great, if not as good, a method of palliation as by myomectomy.

Dr. Giere stated that about 5 per cent of fibroids become malignant or sarcomatous. I had occasion to look this matter up four years ago rather thoroughly, and at that time by averaging a great number of statistics I was able to find an average of only about 2 per cent.

I had the pleasure of reading a paper before the meeting of this Association at Watertown four years ago on the *x*-ray treatment and the operative mortality of fibroid tumors of the uterus, that is, from hysterectomy; and I found that the figures from all sources and all conditions are around 2 per cent. In some of our really good clinics where operations are frequently performed, the mortality is less than 0.5 per cent. In other places it is much higher, but the average is about 2 per cent.

I will say that the main objection to the use of the *x*-ray and radium is, that these myomatous tumors will later become malignant, but against that I will say the operative mortality just about equals the percentage that becomes malignant.

Dr. Arthur T. Mann (Minneapolis, Minn.): I was much pleased with Dr. Giere's paper. It is well written, and the discussion has been eminently sane and practical.

There is always this to remember, that fibroids are seldom single; they are usually multiple, and in making a choice of operation the question arises whether fibroids are present or not, and whether or not there are symptoms present. We have to exercise our best judgment as to what the outcome of this or that particular case is going to be. In the first place, where the fibroids are not large and we have symptoms of hemorrhage, we have some medical means in ergotin and stypticin with which to stop the hemorrhages. In a certain percentage of cases these agents will be effective, and the case should be kept under observation for some time after that. Where these agents are not sufficient, the *x*-ray and radium are sufficient in a certain proportion of cases.

When it comes to the question of myomectomy, I think the number of cases in which that operation should be employed is relatively small because of the fact that there will be so many other fibroids present that the simple removal of one or two of them will not really change the outlook for the patient very much. Sometimes these fibroids appear in great numbers. They grow slowly, as a rule,—particularly fibromyomata.

I had an interesting experience once in the case of a young woman on whom I had operated for hemorrhoids. I made a thorough examination at the time and made a record of it. Her uterus at that time was normal on palpation; but she had hemorrhoids, and I fixed them. Three months later she came in with a number of fibroids in the uterus. I undertook to operate on her, and found that the uterus with its fibroids literally filled the pelvis. She had something like a hundred fibroids, and not one of them was larger than a marble, but each one had grown a little in three months. I say that because in three months the uterus was so full of fibroids that it was impossible to reach down and get the uterine arteries on the side in doing a hysterectomy. I had to split the uterus in the middle, and then turned one-half over and caught the uterine artery after the cervix was severed on that side, in the way suggested by Kelly several years ago.

Sometimes the fibroids will run down into the cervix and alongside of the vagina, so that it sometimes compels one to do a complete hysterectomy. These cases require a good deal of judgment, as most of our surgical work does, and we have to exercise our best judgment in each case as we go along. Certainly, if we do a hysterectomy or a subtotal hysterectomy, one that leaves the cervix, we should always put the broad ligaments and round ligaments into the stump to act as preventive of prolapse.

Dr. Giere (closing): I have not much to say in closing the discussion. I think we all agree as to what should be done in a woman under forty years of age—at any rate, at the age of thirty or less. In a case like that I think the uterus should be spared if there is any possible way of doing it. On the other hand, in those patients who have passed forty or forty-five years of age there is no use of saving the uterus, if it is a menace to the patient's life, and yet there are surgeons who advocate doing myomectomy in those cases wherever possible. I think it is Kelly who tells us that he has removed so and so many fibroids from the uterus which is bound to leave that uterus more or less traumatized, and after all he has only got a non-functioning organ there.

In my paper I confined my remarks entirely to the surgical treatment of fibroid tumors of the uterus. Regarding the treatment by radium and *x*-ray, it is altogether a different proposition. I remember, however, that some years ago Kelly at one of the clinical congresses, held in Chicago, had with him his radium and he was showing it and telling about it and of what wonderful things it did. He was relating his experience with the treatment of fibroid tumors of the uterus with radium and said it was very encouraging indeed. I heard Dr. Kelly at a meeting of the clinical congress later (I don't remember where) and he was not nearly as enthusiastic over the treatment of fibroids by radium as he was formerly.

At Rochester, Minnesota, I remember hearing Dr. William J. Mayo say that those who have radium will insist that it is more effective than the *x*-ray, and those who have the Coolidge tube will insist that they are more successful with it than others are with the use of radium. We have both and we use both, and we do not know that we are more successful with one than with the other. But I do notice whenever I attend clinics at Rochester they are doing hysterectomies and myomectomies right along. Evidently radium and *x*-ray are not sufficiently potent to cure the disease.

I remember many years ago having taken a special course on electricity and electro-therapeutics in Chicago under Dr. Neiswanger. All of you doubtless know of him. He is a great enthusiast, and he was telling of the wonderful cure that was possible in cases of fibroids with the use of galvanism with the positive pole. I knew I had some cases of fibroid tumors at home, and I expected that I would be able to do things with it. Sure enough, in some of these cases it did seem to put a stop to the hemorrhage, but I was watching and watching for a decrease in the size of the tumor or tumors but never saw it, and it is a question in my mind if the *x*-ray and radium treatment will give us the results that we anticipate in these cases of fibroid tumors of the uterus, although we know these agents are very powerful in the cure of superficial growths, but I do not think they are effective in the treatment of deep-seated growths.

When the doctor spoke about the percentage of malignancy being two per cent, I was reminded of what Dr. John A. Wyeth said at the New York Polyclinic once. He had removed a fibroid and was sure that it was malignant. He sent a specimen to the pathologist and received a negative reply. He subsequently sent another specimen and received a negative reply. He kept on until some ten specimens were sent, and the pathologist came back and reported that the tumor was malignant. Unless we get a section from the right place in a tumor, we are apt to believe the microscopist when he says it is benign, when in fact somewhere else within the tumor there is a malignant condition, and Olow, who reports cases of fibroid tumors of the uterus from the University of Sweden, finds a higher percentage than is usually given, and there they make it a practice at the Lund University to examine a number of specimens from every tumor that is sent in to them. In short, they examine more specimens than is usually the rule in most clinics.

INFANT-FEEDING*

By F. C. Rodda, M. D.
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The question of infant-feeding is a very broad one. I can only hope to touch upon certain general points.

The usual criticism of infant-feeding as carried on by men in general practice is, that there is no system, that no attempt is made to follow indications. The method employed is haphazard, or else all children, irrespective of conditions, are put on the same food. As a rule, little history is obtained as to the child's progress up to that time or as to the types of food employed. There is also the feeling that infant-feeding is so obscure or complicated or tinged with chicancery that the average physician does not feel inclined to give the subject much study or attention. I hope to show that this need not be the case, that we have certain indications which will clarify and simplify the feeding of infants.

Great progress has been made in infant-feeding in the past few years. It may be of interest to note various phases of these changes. Previous to a half century ago we had no system as to diagnosis or treatment; but at about that time a classification of the disorders of infant-feeding was made on the basis of functional or organic disturbances of certain portions of the digestive tract, so that such terms as "gastritis," "gastro-enteritis," "ileocolitis," and "colitis" were found in the literature; however, post-mortem examination of children dying of digestive disturbances oftentimes showed no pathological changes in the intestinal tract. A little later, due to the rapid development in the field of bacteriology, a bacterial cause for the digestive disturbances in infants was sought for. The question of the character and quality of the food, especially as to its cleanliness and bacterial content, became uppermost. There was a great movement for production of pure milk, pasteurization of milk, and plans for modifying milk, also an enormous growth of patented manufactured foods, which were supposed to represent an advance over nature's methods. But pure milk and high-sounding names of patented baby foods did not solve the question of infant-feeding, as our mortality-rate was still enormous. A little later, under the teachings of Finkelstein and Czerny, the question of infant-feeding was emphasized from the viewpoint of the chemistry of foods. They also called attention to the fact that the baby was oftentimes at fault, quite as much as the food,—that there are peculiar types of children which tolerate certain foods very poorly. Some progress has been made in classifying these types, though a perfect classification to be sure was not made, it was still a help. For instance, in the large, over-nourished child with eczema, seborrhea of the scalp, enlarged tonsils and adenoids, a subject of frequent colds we recognize as exudative, and know from experience that such children do better when the diet contains but little fat. It is the latter phases of this change of viewpoint which I wish to discuss at this time.

First, in regard to the constituents of the food: The food prepared for the infant must contain certain percentages of protein, fat, carbohydrate, mineral salts, and certain substances not yet isolated, but known as vitamins. Taking breast-milk as a specimen of the ideal food, we find that, on analysis, it shows protein 1.5 per cent, fat 3 to 4 per cent, carbohydrate in the form of lactose 6 to 7 per cent, mineral salts, and certain vitamins. A food deficient in any of these elements will not keep a child in proper condition nor produce body growth. One element cannot replace the other. Certain foods may be prepared giving the proper amount of fat, protein, sugar, and salt, and yet the child will not thrive on them. Experimental work done on rats shows that certain amino-acids are necessary for growth. However, the food may be prepared properly in respect to these elements, having the proper amino-acids, and yet the child will not prosper on it, but will develop scurvy, due, apparently, to a lack of vitamins. Breast-milk contains these vitamins. However, we do not feel sure that artficial foods always contain vitamins in active form, so that orange juice or some other antiscorbutic is given as early as the second month. Further, we know that the fat of cow's milk is not as well tolerated as the fat of mother's milk. Its protein is a little different in type from that of breast-milk, but contains constituents necessary for growth and is usually well digested. Starch, more or less completely dextrinized, is the basis of most carbohydrates in artificial foods.

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The above, then, present the problem from the chemical and physiologiochemical standpoint.

Second, as to the question of relationship of the type of child and the food: Each child can tolerate a certain amount of these various food elements. But this varies with different children. We may say that each child has a certain normal tolerance. This tolerance may be varied by different factors. As far as we know now, the tolerance for protein is high, and probably is not overstepped in any average plan of feeding. On the other hand, the tolerance for fat is rather limited, as also is that for sugar. Further with these two elements: If the tolerance is lowered for one, then the other follows with it. For instance, if a child receives a large amount of top milk with its large percentage of fat, not only does the ability of the child to digest fats decrease, but the ability to digest the sugar falls with it, and vice versa. There is also the question of the various salts in artificial foods. This is largely theory at present, but, unquestionably, there are factors which contribute to digestive disturbance in the mineral constituents of the food.

There is also the factor of the peculiar child, where it becomes a question of the baby not agreeing with the food rather than the food not agreeing with the baby. "What is one man's food is another man's poison" has no greater application anywhere than in infant-feeding. Some children have a very low tolerance for fat. If they receive an excessive amount of this element they become constipated, have large, white stools, lose in weight, vomit, and break out with an intractable attack of eczema. On the other hand, some children tolerate very little starch or carbohydrate. They respond with attacks of tympanites; constipation, alternating with diarrhea; loss of weight; and pallor. Some children show a true anaphylaxis to certain foods. As an example, I may cite a little child now under our care which responds when given a few drops of cow's milk with collapse, nausea and vomiting, urticaria, asthma, and eczema. Touching the child's lips with a little cow's milk is sufficient to cause the face to swell to a point of disfigurement.

The normal tolerance in normal children may be varied, or lowered, or even destroyed in the following ways:

First, by underfeeding; this point is well established in a general way. A starving man when first fed is given only a limited amount of food. One would not then rapidly increase the food for a baby grossly underfed.

Secondly, by over-feeding. Even if the mixture is an ideal one, the baby can fall into a bad state of nutrition simply because of over-feeding. This may occur even with breast-milk, on which the child formerly prospered when given proper amounts.

Thirdly, improper-feeding. By giving food in proper quantity, which is, however, not suited to the particular child, for instance, it might contain too much fat or too much sugar.

Fourthly, by infection. This point, I am sure, is frequently overlooked. The child becomes ill with an acute infection. The mother confuses thirst with hunger, and gives large amounts of milk. The child responds with diarrhea, vomiting, and rapid loss in weight. The death of the child is charged to the infection when, the truth is, improper feeding has been the real cause.

If tolerance for food can be varied in these ways, it is quite as important to know how much food as what food to give. There is no hard and fast rule in regard to this. It has been stated that a child may receive an equivalent to one-tenth of its weight in milk and one-sixth of its weight in fluids during the twenty-four hours. Another rule is that the child receives one ounce more than its age in months. The quantity is also figured in terms of caloric requirements. A new-born requires 100 calories per kilogram of body-weight, or 45 calories per pound, this being reduced 10 per cent for each quarter of the first year. The caloric content of the various foods has been tabulated, so it is a matter of simple computation to determine the quantity desired. But these rules vary according to the amount of nourishment in the food, and also according to the size and weight and condition of the child. You can see that the premature child or the child retaining its birth-weight at the age of four months will require proportionally more food than a normal child at this age. Each case is an entity unto itself. We should give enough food so that the baby is happy and contented, and shows a reasonable gain in weight. This requires the use of accurate scales. It is quite as useless to attempt an abdominal section without proper instruments as to give the child proper care without scales to determine its gain or loss in weight.

How may we then make practical application of these facts and theories in the feeding of infants? First, take an average, normal child. The ideal food is, of course, breast-milk. Every

child should be fed at the breast is possible, and it is possible in a much larger percentage of cases than the average physician admits or knows of. An active campaign on breast-feeding in North Dakota would reduce your infant mortality more than all other efforts combined. However, I do not wish to spend my time on the question of breast-feeding. I believe Dr. Sedgwick addressed this Association on this topic some time ago. There is one situation in regard to maternal nursing which strikes me as being quite peculiar. A child is too often taken from the breast simply because the mother does not furnish enough breast-milk. Why not use what breast-milk there is, and fill out with some artificial food? It would be just as reasonable for a person to refuse a small portion of a very fine steak because he thought he could consume a larger portion. By all means use what breast-milk is obtainable. We are very frequently able to get 12 to 15 oz. of breast-milk in the twenty-four hours, and we feel that this is a very great help to the child, though we have to give in addition, the same quantity of some mixture to provide the proper amount of nourishment.

Cow's milk and its modifications is still our only practical artificial food. With the baby up to two months, we feed a preparation of one-third milk and two-thirds a ten per cent milk sugar solution, either solely or as a complement to the breast-milk. We employ the four-hour interval, or five feedings in the twenty-four hours, and give three to five ounces per feeding, depending upon the age and size of the child. From two to three months of age, until the child is six months old, we increase the proportion of milk to one-half, and dilute with an equal amount of some cereal decoction, such as oatmeal water, rice water, or barley water. The child, at this age, is usually able to digest the amount of starch found in the decoction. We also know that a finer curd of the protein of the milk is formed when a cereal water is given with the milk. The calories, or nourishment, of the food is increased by adding lactose, cane sugar, or dextrimaltose. Because of the lesser tendency to fermentation, we usually employ dextrimaltose in the proportion of 3 per cent. From six months on we increase the proportion to two-thirds milk and one-third cereal water. Sugar may be omitted or reduced, for the baby may now digest some simple cereal, such as cooked rice, cream of wheat, or oatmeal. Vegetable pulp that is very rich in iron and which the growing child needs, may be cautiously added at five to seven months. The quantity of the milk mixture required will now, perhaps, be in the neighborhood of one quart in the twenty-four hours. All cow's milk used, even the certified, is boiled two minutes to sterilize it. Strained orange juice or tomato juice in varying quantities up to one ounce in the twenty-four hours, is given all babies artificially fed. It may be given as early as the beginning of the second month.

How to proceed with the abnormal child or the child in a bad state of nutrition depends largely upon the status of the child and the duration of the digestive disturbances. The child's history is very important. If a child has received a large amount of top milk over a long period of time, the excessive amount of fat may develop diarrhea, vomiting, loss of weight, and eczema. The assumption is that too much fat is the cause. We should, therefore, put the child on milk poor in fat because of the low tolerance to fat. We would usually give a skim-milk mixture, buttermilk mixture, or malt soup. Begin with small quantities, and increase cautiously so as not to exceed the child's tolerance.

It is not my purpose to give formulæ of these foods, as one can find them in the literature of infant-feeding. "The Baby's Food," by Dr. Abt, will give this information. What I wish to emphasize is the question of the indications of the various foods.

On the other hand, if the child has been on a food very rich in sugar, as sweetened condensed milk, the indications would be to get away from this type of food, perhaps using straight milk mixture, cautiously adding a small amount of sugar. If the case is in severe straits, as we frequently see them when the child has been first on a diet high in fat, then high in sugar, our problem is a very difficult one, for the tolerance for all elements except for protein is very low. Under these conditions we are driven to secure breast-milk, and in failure to do so protein milk can be tried.

SUMMARY

I wish to emphasize:

First of all, that all children are not alike. They may react differently with different foods.

Second, that the child's tolerance for food must be guarded very carefully, or very serious digestive disturbances may result which are hard to overcome.

Third, that the food must contain all the elements necessary for growth.

Fourth, that the quantity of all food must be carefully worked out and determined for each individual case.

Fifth, that there are very different indications for feeding in all cases if a proper history can be obtained and a careful examination is made.

Sixth, that, as one approaches the problem in this manner, feeding is not extremely difficult, and there is a rational basis of procedure.

Seventh, that disregard and lack of use of fairly simple methods which are of proved worth, is largely responsible for a very deplorable and discreditable infant mortality.

DISCUSSION

Dr. W. W. Wood (Jamestown): I am very glad I came down this morning, instead of this afternoon, for I should have been sorry to miss this paper.

A number of things Dr. Rodda mentioned were of great interest to me, and I think no subject is more neglected than that of infant-feeding. The tendency is to feed by a sort of rule of thumb, or to feed all babies alike. The feeding of breast-milk and trying to keep to breast-milk were very interesting points. I have made it a practice in the last year never to pump the breast, but in some cases, where the stools become very loose or green, I have had to put the baby on cereal water for a day or two, and I have had the breast pumped out by a milking motion instead of a pump, as I believe this motion tends to stimulate the function. I know of some cases where the breast-milk had decreased to a very small amount, but by allowing the baby to nurse as much as possible from both breasts, and then filling in with an artificial mixture when at certain times of the day there was little or no breast-milk, by using the milking motion to the breast I am satisfied that in a number of cases I have been able to bring the milk back to the breast in the full amount.

Another point is to boil the milk. There is an old theory that boiled milk is constipating, but I have been in the habit for the past year, when resorting to artificial feeding, of starting out by boiling the milk for five minutes, and after the baby is well started gradually reducing that until the milk is heated just to the boiling-point each time. I think there is nothing to the constipation notion of boiled milk. I think it rather increases the digestibility of the milk, and that is the reason it is given in cases of diarrhea, for it aids the digestion and stops the diarrhea.

I would like to ask Dr. Rodda how much orange juice he figures on giving daily when starting in at the age of two months.

I also want to thank Dr. Rodda for his excellent paper.

Dr. W. P. Baldwin (Casselton): I have listened to this paper with great interest. I am sure we are all interested in infant-feeding, but with the best we can do we are often very unsuccessful.

I want to ask Dr. Rodda if he has ever used the Bulgarian tablets. I have had some experience with them. I get them from Hynson & Wescott, of Baltimore, and they seem to give to the children something they do not get otherwise.

I enjoyed the paper very much, and think we should study carefully and observe the digestive work of the child.

Dr. H. T. Irvine (Russell): I have found in country practice that there is a tremendous variation in individual foods given by mothers to the baby. They may make up one feeding that is fairly satisfactory, but so often the amount of sugar will be increased or diminished and the second feeding will upset the child. I have recommended that mothers make up their daily supply, and divide it into seven, eight, or ten feedings, as may appear wise; and in many instances where they were not successful before, they have been successful after that, and I attribute this success to following that plan.

Dr. B. W. Abramson (Kief): Dr. Rodda's paper was so complete in discussion of the phases of infant-feeding that there is little to add, but there is one question, and that is as to acidosis. After all, that is the danger signal of all kinds of trouble, and I think the underlying cause of gastro-enteritis is primarily acidosis, and it is due essentially to the fact that these protein foods contain a great deal of carbohydrates, and they distend the intestinal wall, and the endothelial cells which have to do with absorption are interfered with. As a result we get pain and colic due to distension. In my limited practice I make it a point when I get a case of gastro-enteritis to cut out the artificial feeding completely, and put the baby on rice water or oatmeal water or egg-albumin water. For two days I give calomel, as high as two grains, in divided doses. Then I begin feeding the baby on a rating of two or three months lower than its age, and I find I get good results. I wish Dr. Rodda would emphasize this point and give his opinion of it.

Dr. Rodda (closing): I have nothing to add except to answer the questions.

As to Dr. Baldwin's inquiry: We use the buttermilk mixture very often, buying the buttermilk and making the mixture according to the usual formula. It works ideally if the baby has been on a very high fat mixture, especially if there is vomiting.

As to the boiled milk and orange juice: We were taught always that boiled milk would cause constipation. It may in a comparative way, in that, when given in cases of diarrhea, it may check the trouble. We were also told that boiled milk would produce scurvy, but a reasonable amount of boiling will not cause any trouble whatsoever. However, an added margin of safety may be obtained by giving orange juice, beginning with one teaspoonful, and gradually increasing until the baby is getting an ounce or an ounce and a half in twenty-four hours. Oranges have been and are very high in price, and are often inaccessible; and since Dr. Alfred Hess has found by study that the juice of the ordinary canned tomato serves the same purpose, it may be given in place of orange juice. It can be used with less expense and gives the same results.

As to the question of acidosis: That is quite large theoretically at present. Some facts are fairly well established, but my conception is that acidosis arises only when the baby has been grossly misfed, or is suffering from an infection. The whole chemistry of the body is upset, and the baby falls into this state of acidosis.

My idea in giving this paper was not to give you a multiplicity of detail, but to outline certain indications for the use of the various foods.

GLIOMA OF THE PONS VAROLII

By W. G. Smith, M.D.
HETTINGER, NORTH DAKOTA

Up to within a quite recent date, as soon as the diagnosis was perfected, all interest in tumors of the brain, with the single exception of syphilitic tumors, ceased; but with our improvement in aseptic surgery, and wonderful rapid strides in brain surgery, coupled with a more thorough knowledge of the localization of brain lesions, the way has been opened to as great achievements in this field, as with tumors of nearly any other part of the body.

The works of Macewen, Horsley, Czerny, Troissier, Keen, Wier, McBurney, Gerster, Starr, and others, have placed surgery of the brain on a much surer and permanent basis, and in no field of surgery have results been more strikingly successful; these facts have created new interest, and caused new investigations with results of successful excisions of growths in the brain that, formerly, were classed among the inoperable.

While the class of tumors, about to be discussed, glioma of the pons varolii, cannot be placed in the class of removable tumors under our present knowledge of such growths we believe that a study of this variety of lesions may be of interest, and perhaps be the means of assisting to broaden our knowledge in diagnosing and localizing brain tumors in general.

The mode of development of the morbid process, to which the name *glioma* was applied by Virchow, is still not definitely settled, for Bramwell believes that glioma starts from the white matter and invades the gray matter, while Ziegler holds to the contrary view of development, or in other words, that gliomata take their origin in the proliferation of the neuroglia or interstitial connective tissue of the brain, and are composed of an intercellular substance, which varies in quality and consistence in different parts of the brain and in the abundance of the mixture of cells and nuclei; this is also the opinion of other authors. As some pathologists take the view that glioma begins in the white substance and others that it begins in the gray substance of the nervous tissue, the origin is still on disputed grounds and therefore will not aid in the diagnosis. There is this one fact to be remembered, that upon examination of undoubted glioma, the structural cells very closely resemble those of proliferated neuroglia and the connective tissue of nerve tissues. The most characteristic cells are the small cells with inconspicuous bodies and numerous delicate branching processes. There are, however, usually more or less of the small spheroidal cells with proportionately large nuclei.

By carefully stroking small sections of the glioma in water, or carefully teasing fragments of the tumor, you can usually see with the aid of the microscope the characteristic neuroglia or so-called "spider cells."

Many of these gliomata contain very numerous and frequently dilated thin-walled blood vessels. This one fact will often help to make a differential diagnosis from other brain tumors and more especially from sarcoma, which in mode of development and usual symptoms so very closely resembles glioma. We must remember that gliomata are usually very vascular, much more so than any other of the brain tumors.

Gliomata are usually very soft, but may be moderately hard, depending upon their location and the abundance of developed blood vessels. They are, as a rule, not sharply outlined against the adjacent normal tissues, but they bear, often, a superficial resemblance to the surrounding tissue and frequently it is difficult to tell just how far they extend. Usually, tumors that are as vascular, being as it were, erectile, vary much in size, but occurring as they do within the brain, the tendency to erection increases the intracranial pressure and in this way limits the tendency to variation in the size of their development. These variations of intracranial pressure are manifested by a varying of the intensity of the symptoms, and can in a measure be controlled by medicinal agents that either limit the amount of the cerebral congestion or increase the same. Hemorrhages within the glioma or near the tumor, increase the intracranial pressure and often give rise to symptoms of apoplexy.

In a case of tumor of the brain that is accompanied by great and sudden changes of intensity in the symptoms, accompanied with changes in the circulation in the retina, and that is affected by such measures as hot baths, cold douches to the spine, hot mustard bath to the feet, or watery purgation, the indication will be that you are dealing with a vascular brain tumor, and your diagnosis of glioma will be probable, which will be reinforced by occasional apoplectic attacks. These symptoms apply to the soft or usual

variety of glioma, but we must remember that we do have the harder variety, which is usually encapsulated, and the intracranial pressure does not apply so as to produce these symptoms. In this form of glioma the resemblance to sarcoma is so great that one cannot make a differential diagnosis often during life.

Gliomata are usually solitary, of slow growth, and may exist for a long time without producing any very appreciable symptoms, if the intracranial pressure is slight. On section they often seem to have a translucent, bluish-white appearance, while at the same time they may be firmer and more vascular than the brain itself. Gliomata are also very apt to be complicated with other tumor tissue, forming glioma-myxoma, or glio-sarcoma, and owing to their abundance of thin-walled blood vessels and softness are liable to interstitial hemorrhage, causing apoplectic symptoms, which may be mistaken for results of ordinary apoplectic clots.

Gliomata are, however, most often found in one of the posterior cerebral lobes, and next often, in the outer part of the anterior cerebral hemispheres, according to J. Hughlings Jackson and others. In places where cerebral hemorrhages are rare they are not often found; as Virchow points out, "Cerebral hemorrhages occur precisely where glioma is not usually found, and glioma as a cause of cerebral hemorrhage is quite rare." I would not convey the impression that all parts of the brain may not be affected by glioma, but I would simply call attention to the fact that the most frequent places are the cerebral axis, by which is meant that part of the brain which includes the basal ganglia and internal capsule; the corpora quadrigemina and crura cerebri; the pons and medulla oblongata, which lie upon the cranial floor, also the cerebellum in children and the cortex in adults.

The diagnosis of tumors in the cerebral axis is not difficult, for they give rise to many local symptoms due to involvement of the cranial nerves. It is, however, very important to bear in mind the fact pointed out by Virchow, that it often requires a very attentive examination to distinguish the hemorrhage of gliomata from traumatic hemorrhage, or from red softening, or from rupture of a cerebral aneurism.

Pure gliomata are benign tumors, though in their most common combination with sarcoma, they are very malignant. When situated in the cerebral axis, however, they are beyond the reach of the surgeon, which fact makes them always significant in this location, even though they be benign. The study of brain tumors in children and adults has brought out the general fact that tuberculous tumors are frequent in children and rare in adults, and that glioma and sarcoma, which are about equally prevalent in children, come next in tuberculous tumors, and the additional fact that of all tumors, sarcomatous tumors are the most prevalent in adults, with glioma a close second. If all cases were correctly reported it is quite possible that glioma would head the list in adults, but present statistics do not show this to be the fact.

Believing a case of glioma of the pons that occurred in my practice to be of interest, I will briefly give a resume of it. On May 17, 1895, a patient came to my office complaining of severe localized headache at the base of the brain, with a tendency to be light-headed or dizzy on attempting to make quick movements of the head. I was, at the time, undecided as to the cause and treated him symptomatically. The coal tar preparations were tried without results. Then I tried glonoin and it did no better. Bromides gave no relief, and he continued on in this condition some days, feeling unable to do much of anything in the way of work, for he was a day laborer. He, however, gradually began to mend a little, when on June 23, while walking along the street, he became dazed, could not tell where he was, how he came there, or what he was doing, simply muttering to himself some unintelligible remarks.

He was taken in charge by some nearby friends and carried to a hotel, a few doors away. He was unable to walk, and on the next day the left side and extremities became slightly paralyzed, the paralysis being more marked in the lower than in the upper extremity; this condition lasted eight days before gradual improvement began. During this time salivation was slightly increased. In a few days the left side recovered and the right side and right extremities became partially paralyzed, more marked in the lower than in the upper extremity. Speech and deglutition were also slightly interfered with. The tongue, pulse, and temperature were normal.

I had been acquainted with this man, who was thirty-two years old, for several years. He came of healthy parents, all of his brothers and sisters were enjoying good health, and he gave no history of any sickness or nervous troubles previous to this time. Had always been a hard worker, and enjoyed good health. Could get

no specific history, but suspicioned the same, and as my actual diagnosis was as yet in doubt, notwithstanding his strenuous denial of any specific history, I believed that I was dealing with either a hemorrhagic condition or a syphilitic tumor at the base of the brain, and I put my patient on Squibb's fluid extract of ergot, and iodide of potash, pushing the latter gradually well toward the limit.

Patient continued on about the same until August 1, occasionally having a slight sinking spell in the meantime, but at this time the patient began to grow decidedly worse, and on August 7, I called in consultation the late Dr. W. R. Fisher, of the U. S. Army at Fort Meade. Dr. Fisher advised the continuance of the ergot and iodide of potash, on the theory above referred to.

On August 11, I was called during one of the sinking spells, and found the attack of a slight apopleptic type, with increased salivation, stertorous respiration, difficult deglutition, temporary loss of all power in the right leg, and partial loss in the right arm. The pulse was 130 and temperature normal, except that the right side was colder than the left to the sense of touch.

On November 30, he had a severe attack, apopleptic in character, and for some days it seemed that death was not far distant. After this attack the left forearm began to contract, and the patient lost all control of bowels and bladder. When asked if the bowels or kidneys wanted to act, he would indicate that they did not, and perhaps within five minutes both would move in the bed, and to all appearances the patient would be unconscious of the fact. Dr. Fisher saw the patient with me at this time, and on many occasions afterwards, during the course of the disease. About midnight, of August 12, the left eye closed tightly for between three and four hours, while the right eye remained opened during sleep as well as during the wakeful hours. This condition of the eyes continued during the life of the patient. The speech during a few hours about midnight, was very poor and unintelligible, on account of his poor articulation. The patient was unable to extend the tongue out of the mouth, and the movements of the tongue and jaws was so interfered with that he could chew his food with difficulty, as it was hard to keep the food between the teeth. He could close his lips, but could not pucker them so as to whistle. Patient would choke easily, while eating, and fluids would regurgitate through the nostrils. Respiration would, at times, become very irregular and labored. Salivation would bother the patient while lying on his back, as it tended to choke him. From this time on the patient could not draw up his legs, nor cross them, as he had been able to do most of the time with difficulty. At times he would ask the nurse to uncross his legs, when as a matter of fact they were not crossed, but far apart at the feet. These symptoms continued, and the loss of power gradually increased in degree, until the right leg was powerless to move itself.

These simulative apoplectic attacks became more frequent during the following months of December, January and February, but when the loss of power to assist himself and the apoplectic attacks were at their worst, the patient remained listless, never complaining, and during his entire sickness there was but one bed sore, and that not larger than a fifty-cent piece. Following one of his spells on January 13, I had Dr. McSloy see the patient wath me, but he suggested no change in the medication. I applied electricity to the limbs and used it on the contracted left forearm with no results. The forearm continuing to contract; on February 7, placed it in a plaster cast to retard the contraction, but this caused suffering and annoyed the patient and I abandoned the effort.

On February 14, the patient had another severe spell, during which Dr. Fisher was called in, and for several days lingered at death's door, and then resumed the usual condition. The loss of flesh was very marked, although the appetite remained fairly good. The forearm on left side became completely flexed, so that the wrist rested all the time against the shoulder, and patient had no use of it. Gradually the patient became completely exausted, and the end came on Mar 2, 1896, through the failure of the centres of respiration and circulation to perform their function. For more than three days preceding his death he could neither eat, drink, nor swallow. The Cheyne-Stokes form of respiration, dilated pupils that would not respond to light, a blurred form of vision, a setting of the jaws, and a listless condition were the chief symptoms of the last week of life. Otherwise there was no complications in the disease that I could make out.

Thirty-six hours after death I held an autopsy and carefully removed the brain intact. A superficial examination showed the dura mater normal, and there were no unnatural adhesions. The

whole outer aspect was that of a fairly well nourished brain. The brain was placed in Mueller's hardening solution and kept there, with a frequent change of solution, for a period of six weeks.

Dr. W. R. Fisher and I removed the brain from the solution and made an extended examination of the same. We first made a longitudinal section in the median line, and then made sections of each hemisphere beginning with the cerebrum. Nothing of note was detected until we reached the pons varolii and medulla oblongata.

We found on section of the pons varolii the distinct outlines of the diseased portion, and signs as we believed of softening, or rather a breaking down of a portion of the tumor, as afterwards verified by a miscrosopic examination which Dr. Fisher kindly made. The softness or broken down foyer was found in the center portion of the pons varolii, just above its junction with the medulla oblongata, and involved the left side to a much greater extent than the right, as was indicated by the shrunken and fissured condition of the diseased part caused no doubt by the abstraction of the watery fluids. We believed that some involvement of the medulla oblongata occurred, from the situation of the glioma, and the difficult task of defining where the diseased tissue ceased to affect the normal tissue.

After kindly making the miscroscopic examination of the sections that we made of the pons varolii in its diseased portion, Dr. Fisher informed me that he found many various sized cells of different shape, imbedded in a finely granular and fibrillated matrix of the characteristic neuroglia. He said that some of the cells were of the "spider cell" variety. From the examination of these sections and the cells that they contained, he was of the opinion that the disease was glioma of the pons varolii, for he said that he believed that the microscope excluded neurotic softening, which in general appearance might be confounded with glioma.

From a review of the symptoms it will be seen that the disease must have extended its influence to the medulla oblongata, for we see in this case interference with the centres of respiration, deglutition, mastication and circulation. The gradual and successive implications of many of the cranial nerves is a very interesting feature, as it suggests the seat of origin and later extension of the morbid process.

NEW NORTHWESTERN MEMBERS OF THE AMERICAN COLLEGE OF SURGEONS

The following men in the states named were elected to fellowship in the American College of Surgeons in 1818 and 1819. Only a few of them were elected in 1818, and fellowship was not conferred upon them until this year as there was no convocation of the College in 1918.

MINNESOTA

Dr. Bertram S. Adams, Hibbing.
Dr. Stephen Henry Baxter, Minneapolis.
Dr. William L. Benedict, Mayo Clinic, Rochester.
Dr. William E. Browning, Caledonia.
Dr. Karl A. Danielson, Litchfield.
Dr. Louis E. Dougherty, St. Paul.
Dr. Laura Arlene Lane, Faribault.
Dr. Carl Arthur Hedblom, Rochester.
Dr. James A. Johnson, Minneapolis.
Dr. George Arthur Earl, St. Paul.
Dr. Howard McIllvaine Morton, Minneapolis.
Dr. Olof A. Olson, Minneapolis.
Dr. John deJarnette Pemberton, Mayo Clinic, Rochester.
Dr. Arthur Edward Smith, Minneapolis.
Dr. Anton Shimonek, St. Paul.
Dr. Alphonse E. J. Sohmer, Mankato.
Dr. James Alfred Watson, Minneapolis.
Dr. Archa Edward Wilcox, Minneapolis.
Dr. Harry Bernard Zimmerman, St. Paul.

NORTH DAKOTA

Dr. Victor J. LaRose, Bismarck.

SOUTH DAKOTA

Dr. Alfred G. Allen, Deadwood.
Dr. Burtis T. Green, Brookings.

MONTANA

Dr. Joseph Theobold Brice, Lewiston.
Dr. William H. Buskirk, Miles City.

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THE DIAGNOSTIC CLINIC

The report of a diagnostic clinic printed on another page (605) of the present issue deserves some comment, first, because of the increasing number of diagnostic clinics that are being formed all over the country, and even in small country towns, where patients are referred and are examined by a number of men, each of whom represents a specialty.

In this combination of grouping of physicians under the head of diagnostic clinics there are many good points. Of course, in the larger cities, where more men are available, it would seem that a diagnostic clinic would be a flourishing concern, but so far such clinics have not invaded many of the larger cities and certainly very few of those in Minnesota.

The important and lasting benefits which the patient derives from being examined by a number of skilled men are highly significant, and doubtless a good many patients go through the hands of a clinical group and come out feeling that they have been thoroughly overhauled and that their symptoms have been carefully and systematically diagnosed. This will be readily shown by the report we print which was made in one case covering a number of pages of the regular clinical record sheets. Most patients would be quite satisfied under the circumstances, and particularly those who have definite and demonstrable disorders or diseases.

On the other hand, there are some weaknesses, not necessarily dangerous, in the chain of examinations which must be considered. In the first place, one can readily understand that a patient who goes before a number of men is treated purely and simply as a case, and not always as an individual, consequently, after the examinations are completed, there must be a definite chain of findings upon which one man, at least, will have the authority to form a diagnosis and a prognosis, and recommend a line of treatment. But in this method the individual is left out of the situation, and the patient comes away with several diagnoses and with a very uncertain feeling that something has been left out.

This case, perhaps, points out the weakness of a clinic as well as any other, and the first criticism is that a complete neurological examination was not made. The patient is presented with the findings and with the diagnosis, and this diagnosis is made up of several possible disorders: first, a chronic toxemia, which was discovered because a number of symptoms point in that direction; the next, an appendicitis (we learn that the surgeon was quite insistent that an operation be performed at once, but this was refused); the next, a slight pharyngitis; and following, in order, a mild toxic nephropathy, in which there was a trace of albumin found in the urine. All of these, of course, point to a line of possible focal infection, and the diagnosis dips into the psychochemical system, in which visceral neurology is considered, and the observation is made that the great vagus, the symptomatic nervous system, and the endocrine glands form an important part of the diagnostic argument. The analysis goes so far as to include all of the endocrine glands, including the pineal body. Certainly, if these observations are made with care, and any or all of them are reliable, it shows a wonderful power of penetration by the diagnostician. A man who would attempt to diagnose a disorder of the pineal body is certainly worthy of his title as diagnostician.

Then, too, this unfortunate patient suffered from sacro-iliac relaxation, when, as a matter of fact, the *x*-ray findings, both in the city where the clinic was held and in this city, show that the arches of one vertebra were ununited, allowing a possible incipient spinal bifida to develop. Also, there was some gastroptosis, which, we all know, is a very common condition in the average neurotic who has a congenital defect in his muscular system, or a defect which is shown in other anatomical findings. Hemorrhoids, slight astigmatism, and slightly pronated feet complete the diagnostic catalogue.

When this patient is seen from a different angle and looked upon as an individual rather than a case, the conspicuous thing in the diagnosis was that she is congenitally deficient, both as to her bony structure and muscular system and her visceral and nervous systems, and that most of the symptoms which she exhibits are of the neuropathic type. Consequently, in spite of the fact that this young woman simply passed before the examiners, who made detailed and careful examinations in their respective special lines, and, although she was put in a hospital for four and a half days, some part of her anatomy and physiology was overlooked. The statements were made that she had numbness and pricking of her right side, that her neurology was negative, and a third visceral neurology says that this has no neurological value whatever, while to us it seems quite patent that it is of the utmost value in determining the individual construction and functioning of the various systems and organs within the body.

This report came to us several months after the examinations were made; and, while we had the matter of its publication under consideration, the patient herself was brought into the office by another physician, and therefore our comments on the report are based on the report itself, as well as upon our examination.

It will be noted, by referring to the original report, that the clinic is composed of eleven physicians with, of course, numerous assistants. The names of twelve physicians and one registered nurse appear on the report, but of this number only four are members of the clinic, so that seven members of the clinic apparently did not see the patient.

The fee for making this examination and report, including four and a half days in the hospital, was sixty-two dollars, and one wonders how this was divided up,—how much the hospital received and how much the clinic received. In most of these clinics everything that is done by each individual member of the clinic is turned over to the business manager, all fees going into one common purse from which the expenses of the clinic are paid, and after deducting these expenses the remaining moneys are divided pro rata among the men of the clinc.

INFLUENZA CASES REPORTABLE IN MINNESOTA

The City Health Officer of Minneapolis, Dr. H. M. Guilford, is exceedingly desirous to have all Minneapolis physicians comply with the regulations of the State Board of Health which makes all influenza cases reportable. The report of Dr. Guilford leads us to ask why all such regulations of any health organization should not be rigidly complied with by every physician under the jurisdiction of such organization. Of course, some of these regulations may seem useless and some may seem foolish, but most of them are, probably, the best that can be made workable under existing conditions.

Disrespect for law, or laws, is too prevalent in our country, and nowhere, perhaps, except among the wholly lawless, is it more generally manifested than in the medical profession on the point of vital statistics, as is clearly proven by the large number of states that remain outside of the governmental registration area.

If one were disposed to demand of the State authorities a specific definition of influenza, with the symptoms that differentiate it from all other diseases, the authorities might find themselves perplexed. If, on the other hand, no cases are reported, no effort can be made to prevent or control an epidemic. Is it not better, then, to err on the side of leniency, and report strongly suspicious cases as cases of influenza, even if quarantine must follow as a safeguard to the community?

A REALLY REMARKABLE LOCAL MEDICAL SOCIETY

An editorial on moribund local, or minor, medical societies has been germinating in this office for a couple of years, and has been written in full two or three times, but it has been denied entrance to these columns for several reasons, yet it may appear some day in spite of its lugubrious content.

That there is one live minor, or local, medical society we have evidence in the program of the Southern Minnesota Medical Association, published on another page, and in the work of this society for several years past. The amount of work in collecting the material for such a program may justly be described as prodigious, covering, no doubt, many, many weeks of time, and calling for an energy and ability rarely found in the form of unpaid volunteer work. We do not know who does this work, but we do know it deserves the highest commendation the society can bestow.

REPORTS OF SOCIETIES

ANNUAL MEETING OF THE SOUTHERN MINNESOTA MEDICAL ASSOCIATION

DECEMBER FIRST AND SECOND, 1919

MANKATO, MINN.

OFFICERS

John Williams, President, Lake Crystal, Minn.
W. E. Sistrunk, First Vice President, Rochester.
W. J. Richardson, Second Vice President, Fairmont.
H. T. McGuigan, Secretary, Red Wing.
G. F. Merritt, Treasurer, St. Peter.
William Whitford, Official Reporter, Chicago.

ANNOUNCEMENTS

Annual Banquet at Masonic Hall, Monday, December 1st, 8:30 P. M.

The evening session will be called Monday evening, December 1st at 7:30 o'clock at Elks Auditorium.

The banquet will be held Monday evening, December 1st, at the Masonic Hall. Tickets for banquet must be procured at Headquarters, first floor, Elks Club.

Make your reservations for plates at banquet and for hotel accommodations at once.

The physicians of Mankato will entertain all visiting physicians and their ladies at luncheon at the First Presbyterian Church, Tuesday, December 2nd at 12:15 P. M.

Entertainment is being provided for visiting ladies.

The C. N. W. R. R. will have special coaches for the physicians attending the meeting.

Arrangements are being perfected for a special on the C., St. P., M. & O. R. R., to leave Minneapolis at 3 P. M. and arrive at Mankato at 6 P. M.

EVENING SESSION—MONDAY, DECEMBER 1, 1919.

Annual Banquet—Masonic Hall

President's Address—The Activity of the Southern Minnesota Medical Association in Public Health.—John Williams, M. D., Lake Crystal.

The Surgical Treatment of Bunions—Chas. H. Mayo, M. D., Rochester.

Discussion by H. W. Meyerding, M. D., Rochester; A. R. Colvin, M. D., St. Paul.

The Treatment of the Second Stage of Labor, with Special References to the Prevention of Injury to the Child and to the Pelvic Floor.—J. B. De Lee, M. D., Chicago, Ill.

Abstract—1. Definition of Second Stage of Labor. 2. The dangers to the mother are both, (a) immediate, and (b) postponed; (a) exhaustion, nervous shock, sepsis, rupture of the uterus, damage of the pelvis floor, of which there are three kinds, lacerations of muscle and fascia, overstretching of same, and dislocation of the organs and of the muscles and fasciæ; (b) neurasthenia, prolapsus, and dislocations of the uterus, rectocele, cystocele, residual urine, ascending infection, Bright's disease, etc. 3. The dangers to the child are, (a) immediate and (b) postponed; (c) asphyxia from abruptio placentæ, and compression of brain or cord, and hemorrhage into brain; (d) brain injury or damage to nerves of special senses. 4. Treatment of the second stage differs in the home from that of the maternity. Differs in hands of occasional practitioner and from that of the trained obstetrician. For the one, watchful expectancy is the rule; for the other, surgical delivery, episiotomy, forceps, suture. 5. The value of the head stethoscope in discovering danger to the fetus. Discussion by Fred L. Adair, M. D., Minneapolis; Wm. H. Condit, M. D., Minneapolis.

Technic for the Removal of Intrathoracic and Substernal Goiters.—Edward S. Judd, M. D., Rochester.

Abstract—Résumé of the surgery of intrathoracic and substernal goiters, mentioning especially some of the technical points in the operation.

Discussion by Archa E. Wilcox, M. D., Minneapolis; Wm. C. Carroll, M. D., St. Paul.

Some Applications of the Principle of Focal Infections Including a Technic Applicable to Dental Infections.—Arthur D. Dunn, M. D., Omaha, Neb.

Abstract—The principle of focal infection applied to conditions of obscure and diversified etiology, such as chloranemia, neurasthenia, fag, hypertension, headaches, vertigo, etc. Case-reports. Focal infection as an extra load, diverting energy from normal channels. The removal of foci of infection as a clinical experiment. Its control. Alveolectomy—its technique and indications An operation that satisfied the demand of a well directed and well controlled experiment in removal of one type of infection. Conclusions.

Discussion by W. L. Shearer, D.D.S., Omaha, Neb.; E. C. Rosenow, M. D., Rochester; Boyd S. Gardner, D.D.S., Rochester.

Experimental Studies on Etiology of Influenza.—E. C. Rosenow, M. D., Rochester, Minn.

Abstract—1. Reproduction of the pathological picture of the disease in animals. 2. Variations in virulency of bacteria in sputum on successive intratracheal injections. 3. Mortality-rate in persons according to the time of epidemic waves of the disease. 4. Therapeutic results with an immune serum produced in the horse.

Discussion by W. P. Larson, M. D., Minneapolis; Kano Ikeda, M. D., Minneapolis.

TUESDAY, DECEMBER 2, 8:00 A. M.

Recent Studies upon the Therapeutic Application of Benzyl Alcohol, Benzyl Benzoate and Some Homologous Compounds.—A. D. Hirschfelder, M. D., Minneapolis.

Abstract—Discussion of Macht's studies on benzyl alcohol as a local anesthetic. Advantages and disadvantages. Studies upon related chemical compounds of the same series. Physiological action of benzyl benzoate. Its therapeutic applications in clinical conditions due to spasm of smooth muscle throughout the body, especially asthma, dysmenorrhea, cardiospasm, pylorospasm, etc. Beneficial results and limitations.

Discussion by E. T. F. Richards, M. D., St. Paul; H. Z. Giffin, M. D., Rochester; J. C. Litzenberg, M. D., Minneapolis.

Acute Perforation of Stomach and Duodenum.—N. O. Ramstad, M. D., Bismarck, N. D.

Abstract—1. Acute perforations; their frequency, seriousness, and classes. 2. Pathology and symptoms; physical findings and differential diagnosis. Prognosis and treatment. Medical and surgical indication for gastro-enterostomy; methods of drainage and technic. Case-reports.

Discussion by R. E. Farr, M. D., Minneapolis; J. S.

Holbrook, M. D., Mankato; C. J. Holman, M. D., Mankato.

Tuberculin in the Recognition of Obscure Tuberculosis.—J. H. Stokes, M. D., Rochester. Discussion by S. E. Sweitzer, M. D., Minneapolis; J. G. Cross, M. D., Minneapolis.

A Modified Inguinal Hernia Technique.—George Earl, M. D., St. Paul.

Abstract—Comparative anatomy would indicate that the upright position of man resulting in a vertical inguinal canal as contrasted with the oblique or horizontal line of mammals on all fours is a factor in hernial development. Transposition of the cord gives the great mechanical advantage of increased obliquity and permits a more perfect closure of the lower portion of the inguinal canal, weakest because of anatomical structure and position. The tendency has been towards increased transposition,—that is, placing more structures under the cord and leaving less covering. A routine technique of a more advanced transposition has been tried without finding any functional or anatomical objections.

Discussion by Verne C. Hunt, M. D., Rochester; W. A. Dennis, M. D., St. Paul.

Conditions Contra-indicating Operation with Stone in the Kidney and Ureter.—W. F. Braasch, M. D., Rochester.

Abstract—Conditions contra-indicating operation. Bilateral lithiasis. Size and situation of stones. Renal function. Degree of suppuration. Extra-urinary complications. Non-surgical treatment. Injection of dilating media. Instrumentation. Number of stones so removed at Mayo Clinic.

Discussion by Oscar Owre, M. D., Minneapolis; Gilbert J. Thomas, M. D., Minneapolis.

Modern Conceptions Regarding the Radical Mastoid Operation.—Horace Newhart, M. D., Minneapolis.

Abstract—The need of a more intimate knowledge of the subject on the part of the general practitioner. Definition of the operation. Anatomical and Pathological considerations. Chronic middle ear suppuration a focal infection involving serious possibilities to operation. Technic. End-results as to acuity of hearing and permanence of healing. Conclusions.

Discussion by W. R. Murray, M. D., Minneapolis; Carl L. Larsen, M. D., St. Paul; R. A. Barlow, M. D., Rochester.

The Relation of Hepatitis to Cholecystitis.—Wm. Carpenter MacCarty, M. D., Rochester.

Abstract—A study of fifty livers associated with cholecystitis. Frequency of hepatitis chronica as an associate lesion seems to demonstrate that cholecystitis is but one manifestation of a condition frequently if not always affecting the whole biliary tract.

Discussion by H. E. Robertson, M. D., Minneapolis; A. W. Sohmer, M. D., Mankato.

Lesions of the Knee-Joint.—Emil S. Geist, M. D., Minneapolis.

Abstract—Case-reports and comments upon some of the less frequently seen lesions of and near the knee-joint, together with remarks upon their treatment.

Discussion by A. A. Law, M. D., Minneapolis; J. R. Ruth, M. D., Duluth.

Afternoon Session—Tuesday, December 2.

The Treatment of Diabetes Mellitus.—L. G. Rowntree, M. D., Minneapolis, Professor of Medicine, University of Minnesota.

Abstract—Allen's treatment—Joslin's modification; treatment followed at the University Hospital; treatment of various complications; treatment of renal glycosuria; results of treatment, immediate and end-results; care of patient at home.

Discussion by D. M. Berkman, M. D., Rochester; J. P. Schneider, M. D., Minneapolis; S. Marx White, M. D., Minneapolis.

The Surgical Treatment of Gummatous Osteitis of the Skull.—A. W. Adson, M. D., Rochester.

Abstract—Résumé of the surgical treatment of gummatous osteitis of the skull. Technic employed. Report of cases treated, with the use of lantern-slide illustrations.

Discussion by Gilbert J. Thomas, M. D., Minneapolis; A. R. Colvin, M. D., St. Paul.

The Diagnosis of Cardiac Disease.—Jas. S. Gilfillan, M. D., St. Paul.

Abstract—Cardiac murmurs, functional and organic. Influence of position, exercise, etc., on murmurs. The significance of various murmurs. Discussion of tests of cardiac sufficiency and reserve strength. Inadequacy of all tests for reserve strength.

Discussion by John E. Hynes, M. D., Minneapolis; W. D. Shelden, M. D., Rochester; C. P. Robbins, M. D., Winona.

Clinical Study of Gastrojejunal Ulcer.—Geo. B. Eusterman, M. D., Rochester.

Abstract—Purpose of the study. Brief consideration of factors giving rise to post-surgical gastric disturbance, or recurrence of original symptoms. Reasons for difficulties in recognizing underlying causes. End-results in the surgical treatment of benign gastroduodenal lesions. The influence of improvement in surgical technic. Gastrojejunal ulcer: its relative infrequency. Etiology, pathology, and complications in brief. Detailed consideration of symptomatology and diagnosis. Conclusions.

Discussion by Hugh Willson, M. D., Minneapolis; M. H. Cremer, M. D., Red Wing.

Lethargia Encephalitis—E. M. Hammes, M. D., St. Paul.

Abstract—Brief review of the literature; discussion of the varied symptomatology and spinal fluid findings; report of cases.

Discussion by W. A. Jones, M. D., Minneapolis; A. W. Morrison, M. D., Minneapolis.

The Value of the Study of Blood-Pressure in General Practice.—J. W. Andrews, M. D., Mankato.

Abstract—The value in the practice of medicine from blood-pressure findings is only recently recognized by the profession. In a short history, Riva Rocci, an Italian, gave to the profession the first practical application of the principles; the kymographion; what is blood-pressure, and what is involved in its production? A demonstration by means of Davidson's syringe; the mechanics of blood-pressure. Blood-pressure findings of great value to the physician in treatment and prognosis. Clinical report of cases. Conclusions.

Discussion by John W. Bell, M. D., Minneapolis; Chas. L. Greene, M. D., St. Paul.

NEWS ITEMS

Dr. J. A. Roy has moved from Kensington to Argyle.

Dr. W. C. Dietrich has moved from Waverly to Hanley Falls.

Dr. W. C. Aylen has moved from Fargo, N. D., to Mandan, N. D.

Dr. E. W. Hayes, of Brown Valley, has moved to Santa Ana, Calif.

Dr. F. H. Creamer has opened his new hospital at Dupree, S. D.

Dr. H. F. Saylor has moved from Aberdeen, S. D., to Huron, S. D.

Dr. A. L. Amesberry has moved from Erwin, S. D., to Carthage, S. D.

Dr. E. H. Field has moved from Shoshone, Idaho, to Powers Lake, N. D.

Dr. W. O. Reser has moved from Burlington, Wyoming, to Absarokee, Mont.

The Soo Railway Surgical Association meets in Minneapolis on December 8 and 9.

Drs. O. C. Strickler and T. F. Hammermeister, of New Ulm, have dissolved partnership.

Dr. W. H. Cuthbert, of Crary, N. D., has purchased the practice of Dr. E. C. Haagenson, of Hillsboro.

The Scandinavian hospital at Iron Mountain (near Duluth), Wis., has been sold to Dr. W. J. Anderson.

Dr. F. P. Rasmussen, of Center, N. D., will take a postgraduate course in Chicago, and then locate elsewhere.

Dr. J. J. Mertens, of Gettysburg, S. D., has been discharged from army service, and has resumed practice.

Dr. D. O. Wheelock, who practiced at Epping, N. D., before entering the service, has located at Ree Heights, S. D.

Dr. N. B. McLean, formerly of Kenmare, N. D., after long and varied war service, has located at Crosby, N. D.

Dr. J. T. Donovan, of Litchfield, has returned from war service. He has recently been located at Bufort, Germany.

The program of the annual meeting of the Southern Minnesota Medical Association on December 1 and 2 appears on another page of this issue.

Dr. R. J. Morrisey, of Fort Pierre, S. D., is said to be the first doctor in that state to make a professional visit in an airplane.

Dr. A. C. Strachauer, of Minneapolis, has been appointed head of the Department of Surgery of the University Medical School.

Since the return of the Drs. Bratrud to Warren, the hospital has grown so fast that an addition is necessary and will be built at once.

Dr. J. B. Shalett, of Minneapolis, has moved to Rockford, which has been without a physician since the death of Dr. Wooster, some months ago.

The Hennepin and Ramsey County Medical Societies will hold a joint meeting at the Town and Country Club on Monday evening, Nov. 17.

Dr. S. G. Pake, who formerly practiced in Hayward, Wis., has resumed his practice in Duluth, where he was located when he entered the service.

The Swedish Hospital of Minneapolis has a supply of radium sufficient for all hospital use, and is the first general hospital to be thus equipped.

Dr. P. F. Rice, of Solon, N. D., has returned after two years' service in the army, with one year in Europe. He was commissioned major in March last.

The Stearns-Benton County Medical Society met in St. Cloud last month, when papers were read by Dr. George Rice, Dr. W. L. Beebe, and Dr. C. S. Sutton.

Dr. C. A. Fjelstad, who formerly practiced in Austin, has completed a course of postgraduate study in eye, ear, nose and throat work, and has located in Minneapolis.

Dr. J. F. Corbett, head of the Department of Experimental Surgery in the University Medical School, has resigned, and will enter private practice in surgery in Minneapolis.

Dr. Sherman Lull, of Summit, S. D., representing the Department of Venereal Diseases of U. S. Public Health Service, is endeavoring to establish venereal clinics in that state.

Dr. J. C. Jackman, Minot, N. D.; Dr. B. W. Abramson, Anamoose, N. D.; and Dr. T. F. Leatherwood, Minot, N. D., are now members of the North Dakota State Medical Association.

Dr. Harry A. Britton, who has been superintendent of the Minneapolis City Hospital since the resignation of Dr. H. O. Collins, a year ago, has resigned, and will resume private practice.

Dr. Paul W. Giessler has resumed civil practice

in Minneapolis since returning from France, with offices in the LaSalle Building (rooms 303-309). His practice will be limited to orthopedic work.

St. Paul is having a valuable series of health lectures by local physicians given in the school buildings of the city. Dr. J. T. Christison, Dr. Walter Ramsey, and Dr. G. K. Hagaman are the lecturers.

Drs. J. Frank Norman, R. L. Kirsch, and F. M. Dryden, of Crookston, have formed a partnership to become effective on January 1. They will have commodious and well-equipped offices, with one or more assistants.

Dr. Harry E. Bank, formerly of St. Paul, is expected home this week, bringing back a French bride. He returned to this country a couple of months ago. and has been in Philadelphia doing postgraduate work in surgery.

Dr. Nellie Pederson, a 1918 graduate of the Medical School of the University of Minnesota, after spending over a year in the Asbury and Minneapolis City Hospitals, sailed last week for China as a medical missionary.

Dr. Carl H. Horst, of Butte, Mont., is doing postgraduate work in Kansas City, Mo., and will visit the leading mid-western clinics before returning to Butte. Dr. Horst took postgraduate work at Johns Hopkins in the spring.

Dr. A. G. Patterson, of Lisbon, N. D., died on October 22, following an operation, in Chicago, for gall-stones, at the age of 59. Dr. Patterson was a graduate of Trinity, of Toronto, class of '89, and came at once to North Dakota.

Dr. P. C. Pilon, of Paynesville, who went to France in 1917, and again when the American army sailed, found a bride in that country and was married last month to Miss Margaret Quaeyhaegs at Paillac, France. They are expected home next wek.

The Northwest sent a large number of surgeons to the annual meeting of the College of American Surgeons and the Clinical College of Surgeons, held last month in New York City. We shall give the entire list of those in attendance in an early issue.

At the annual meeting of the Blue Earth County Medical Society, held last month, the following officers were elected: President, Dr. J. A. Broburg, Blue Earth; vice-president, Dr. R. C. Farrish, Sherburn; secretary-treasurer, Dr. R. C. Hunt, Fairmont.

Dr. Christopher Graham, of Rochester, until recently a member of the Mayo staff, has given Olmsted County the fairgrounds and buildings for an aviation field and for agricultural exhibits. The property is valued at $60,000, but is almost invaluable to the county.

The president, Dr. C. E. McCauley, of Aberdeen, and the vice-president, Dr. A. S. Jackson, of Lead, have tendered their resignations from the South Dakota State Board of Health and Medical Examiners. The cause of these resignations is not known to us.

Dr. Christian Kachelmacher, an eye, ear, nose, and throat specialist of Fargo, died last month at the age of 48. Dr. Kachelmacher was on his way to Battle Creek for treatment, and while in a Chicago hotel shot himself. He was a graduate of the University of Christiania, Norway, class of '97.

Dr. N. J. Nessa, of Sioux Falls, S. D., was discharged from war service last month. Dr. Nessa saw service at Fort Riley M. O. T. C., at Camp Humphreys, Va., and at Fort Oglethorpe, Ga. He did *x*-ray work at the last-named place and became röntgenologist of General Hospital No. 14 at that place. He spent six months in the General Hospital at Fort Sheridan, Illinois.

Dr. Charles H. Hall, of Huron, S. D., died last month at the age of 73. Dr. Hall went to Huron only a year ago, having practiced in Madison, Wis., over forty years. He was a graduate of both the Jefferson and Hahnemann Medical Schools of Philadelphia. He had the A. M. degree from the University of Wisconsin, and had also taken a business course in law at the same university.

Dr. Frank O. Sherwin, a pioneer physician of Duluth, died in that city last month at the age of 66. Dr. Sherwin graduated from Rush in '81, and, after practicing a few months in Iowa, moved to Duluth. He was marine surgeon for the port of Duluth over twenty years, and was health officer of Duluth for one term. He was a friend of the people, and especially of the poor, and friends say he never sent a bill to a patient.

Of the twenty-three applicants who took the Montana examination to practice on November 1, only thirteen received certificates. They were the following: A. L. Hart, Huntley; E. C. Kading, Bozeman; R. W. Furman, Glendive; J. P. Weyrens, Rochester, Minn.; C. E. Emery, Butte; L. G. Dunlap, Anaconda; O. F. Starr, Great Falls; F. L. Andrews, Billings; Otto H. Hefftter, Great Falls; A. L. Gleason, Great Falls;

Charles A. Ballard, Harlowton; A. W. Treat, Sidney; John W. Rose, Great Falls.

Dr. Elmer H. Lutz, of St. Paul, has returned from France, and will resume practice as soon as discharged. Dr. Lutz had an unusual amount of active service. He was in hospital service at Chateau Thierry, in the second battle of the Marne, the Aisne, the Marne offensive, St. Mihiel, and the Meuse-Argonne, and later saw service in Germany at Coblenz. He was once wounded by a shell. He wears six stars on his victory medal.

As far as we are able to learn the following South Dakota medical men in the Medical Corps in the World War held the rank of major or of lieutenant-colonel: Dr. James A. Mattison, of Hot Springs, was commissioned lieutenant-colonel; and Dr. B. A. Bobb, Mitchell, Drs. G. G. Cottam and G. A. Stevens, of Sioux Falls, Drs. Felix Ashcroft, A. G. Allen and T. W. Moffitt, of Deadwood, and Bartholomew Bentley, of Rapid City, were commissioned majors.

The Minnesota Pathological Society held a meeting in Minneapolis on October 21, at the Institute of Anatomy. This is the first meeting held after an interruption of a year. The program consisted of presentation of specimens as follows: Dr. E. T. Bell presented specimens of cardiovascular conditions; Dr. M. Barron presented a specimen of pancreatic calculus; and Dr. H. E. Robertson presented a lipoma myxomatodes with recurrence in the same locality after an interval of two years. The main paper of the evening was presented by Dr. Louis B. Wilson, of Rochester, on "The Autopsy Service in the A. E. F." This paper was discussed by Dr. H. E. Robertson. The next regular meeting will be held on Tuesday evening, November 18, also in the Institute of Anatomy.

(See additional news item on page 621.)

PUBLISHER'S DEPARTMENT

THE BRISTOL-MEYERS CO.

The manufacturers, Bristol-Meyers Co., of Sal Hepatica, claim for this preparation that it is a pleasant and effective laxative and eliminant, the use of which is indicated by chronic constipation, which is certain to result in various forms of auto-intoxication, and gastric and hepatic disorders.

LISTERINE

Listerine is just what its manufacturers claim it to be, and nothing more. It is a non-poisonous, non-irritating antiseptic solution, so satisfying to the patient that it has become an almost universal vehicle for practically all drugs requiring a vehicle; and it also has a large field of usefulness as the basic ingredient where one or more of its constituents are indicated.

Listerine is probably prescribed over the telephone as a remedy to be taken until the physician can see his patient more than almost any other preparation.

The Company will be glad to send a sample bottle free, and literature, to any physician.

NUJOL

So long as the causes of constipation cannot be removed by a proper mode of living it must be treated by medication with drugs, which is an evil equal to the constipation itself, for drugs aggravate the condition, or it must be treated mechanically, the only proper way.

A suitable mineral oil that will not digest in the stomach or disturb the stomach, but will lubricate the hardened stool in the intestine, is the modern way of dealing with constipation. Such a lubricant is Nujol, put up by the Standard Oil Company's Laboratories with a perfect guarantee of its purity, its uniformity of manufacture, and its efficiency.

LAVORIS

The phenomenal success of Lavoris, for such its success has been, cannot be said to be due to extravagant claims made for it in its advertisements or its literature, for no such claims have ever been made, and, moreover, it has never been advertised in a sensational manner.

Lavoris has become known as "the original zinc chloride antiseptic," and the elegant form in which it is put up has induced many to use it, and thus find out its real worth.

The therapeutic value of the ingredients of Lavoris commend it to all physicians, and the elegance of the combination makes it most pleasing.

X-RAY EQUIPMENT

Messrs. Noyes Bros. & Cutler call the attention of our readers, in a special announcement on another page, to the fact that they can supply *x*-ray equipment of all dependable types to meet the special needs of the purchaser, the prices of such equipment running from $150 upward. It is always wise for a doctor buying new appliances, especially in the electric field, to seek the advice of a dependable house, in order to get just what the doctor needs, and particularly not to get what will not best serve him.

The above is surely sound advice. The one who acts upon it finds the always dependable house; and surely the old-established and well-known house of Noyes Bros. & Cutler is wholly dependable.

They also call attention to the fact that they are Northwestern representatives of a large number of well-known manufacturers of electrical appliances.

THE SOUTH SIDE SANITARIUM OF MINNEAPOLIS

There are very few small private hospitals for the treatment of mild mental cases in the Northwest, and none better equipped than the South Side Sanitarium of Minneapolis, which is conducted by the editor of THE JOURNAL-LANCET.

The sanitarium is limited to twenty patients, and is full practically all the time. It is under an exceedingly efficient superintendent, who maintains a corps of assistants of the highest efficiency; and the service is never stinted at any point.

The sanitarium is located at 1400 Ninth Ave. S., Minneapolis, in a fine residence district only a short distance (less than a block) from a beautiful city park.

MICAJAH'S WAFERS

The adage that old friends are apt to prove best friends, is exemplified to no uncertain degree in the case of both Micajah's Wafers and Micajah's Suppositories. These two products were placed upon the market years ago, and have been always ethically brought to the attention of the medical profession. Their constantly increasing use, bears convincing testimony of their worth. The wafers are astringent, antiseptic, antiphlogistic, styptic, soothing and healing. They can be used either as such, or as a powder or in solution. The suppositories possess like properties and will be found of the greatest service in cases of hemorrhoids, in which operation is impracticable or refused by the patient.

Samples of either or both of these products together with literature will be sent to any physician on request to the Micajah & Co., Warren, Pa.

THE OTTAWA TUBERCULOSIS COLONY

Among the men who are classed as experts in dealing with tuberculosis and with tuberculous patients is Dr. J. W. Pettit, 302 South State St., Chicago, who is the medical director of the Ottawa Tuberculosis Colony. It is safe to say that Dr. Pettit brings to this institution a scientific knowledge of tuberculosis unexcelled at home or abroad; and the long-continued success of the institution testifies to the excellence of the management in the matter of the comfort of patients.

It is the bounden duty of every general practitioner who may be called upon to advise his patients or their relatives about the institutional treatment of the tuberculous, to be familiar with the work of all such institutions as the Ottawa Colony.

A very valuable booklet on the work of the Colony and the treatment and care of the tuberculous can be obtained free by addressing H. V. Pettit, Superintendent, Ottawa, Illinois.

AN OLD FRIEND IN A NEW FORM

The physician who has been accustomed to prescribe that well-known and dependable hematinic and tonic, Gude's Pepto-Mangan, will, no doubt, be pleased to learn that it is now available in tablet form. The active medicinal ingredients are identical with those of the liquid form, each two tablets being equivalent in medicinal activity to one tablespoonful Pepto-Mangan, liquid. The new tablet form of the preparation is by no means intended to supplant or displace the liquid, but rather to supplement it by furnishing this standard blood tonic in a form especially convenient for travelers, teachers, business men and women, and those who find it inconvenient to carry the liquid from place to place. Pepto-Mangan, in tablet form, is marketed in bottles containing sixty tablets, the contents of each bottle being equivalent in dosage to one bottle of Pepto-Mangan, liquid. We are confident that the physician will approve of and take advantage of this old friend in a new form.

ANASARCIN

There are few, if any, conscientious physicians who, when engaged to take charge of a pregnant woman, neglect to watch very carefully the condition of the kidneys. Albuminuria in pregnancy is always a danger signal. It is true that a slight amount of albumen may not mean serious trouble. It is also true that all legitimate and safe means should be taken to insure the functional activity of the kidneys and thus bring about adequate elimination of irritating or toxic substances formed in the body. Such substances are always formed to a certain degree, and Nature depends upon their constant and thorough elimination to maintain safety.

When albuminuria exists in pregnancy, many physicians immediately take steps to overcome it by the administration of Anasarcin Tablets. Anasarcin is a safe, yet efficient diuretic, which can be given without hesitation during pregnancy and which will, in the majority of cases give prompt evidence of its beneficial action and effect. The physician should also bear in mind, that in dropsical conditions that occur as a result of cardiac lesion during chronic Bright's, after scarlet fever and as a result of cirrhosis of the liver, Anasarcin Tablets may be used with every confidence of satisfactory results. Anasarcin acts not only upon the kidneys, but upon the heart. It controls cardiac rhythm; hence, Anasarcin Tablets are also useful in the treatment of cardiac neurosis and of exophthalmic goiter.

Literature, case-reports, and samples of Anasarcin Tablets will be sent to any physician on request. The Anasarcin Chemical Co., Winchester, Tenn.

INFLUENZA-PNEUMONIA VACCINE

The practical evidence which has been made available the past year on the subject of the immunizing value of vaccines against influenza and its complications cannot be denied. Nor can a physician fail at this time to give serious consideration to the advisability of protecting his patients by prophylactic inoculation; for, while the *last word* may not have been said on this subject, a most convincing *first word* is found in the published statistics of Dr. E. C. Rosenow, Mayo Foundation, on the application of the vaccine devised by him and issued *gratis* for use from his laboratory during the height of the epidemic.

This vaccine was a mixed, polyvalent vaccine prepared from the various fixed types of pneumococci, pneumococci of Group IV, hemolytic streptococci, staphylococci, and influenza bacilli, all recently isolated from cases of influenza, and adjusted to meet the bacterial flora encountered during the epidemic.

The reports obtained from the extensive use of the vaccine in all sections of the country indicate that no special adjustment to a given section was essential; that a diminished incidence of recognizable influenza followed its administration, and even when absolute protection was not afforded, milder attacks were noted and an almost entire absence of fatal complications.

The vaccine rapidly passed from an experiment to an assured success, and the demand for it has grown to proportions which exceed the facilities of the research laboratory. Because of this fact, an announcement by Eli Lilly & Company will be of much interest to physicians. This firm, which, it will be remembered, co-operated last year with Dr. Rosenow in making his product of partially autolyzed pneumococci (Pneumococcus Antigen) available for further trial and use, is now supplying, in any quantity, a saline vaccine prepared, according to not only the formula, but also to the method of Dr. Rosenow (Influenza-Pneumonia Vaccine). This preserves for the profession the identity of the vaccine, and insures from its use a continuity of the very favorable results obtained last year.

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CLOSURE OF FECAL FISTULÆ BY INDIRECTION*

By R. C. Coffey, M.D.
PORTLAND, OREGON

In the *Annals of Surgery*, for June, 1907, an article by me, entitled "Remote or Indirect Subperitoneal Drainage in the Extraperitoneal Closure of Persistent Fecal Fistula," was published.

After studying the subject of fecal fistula as it was given in the literature and as observed in a number of personal cases, the conclusion was reached that, aside from the essential or conservative fistulæ which are due to an actual mechanical obstruction beyond the opening, such a valvulus or tuberculous or malignant process, persistent fecal fistula, for all practical purposes, is the same as hernia. The treatment is exactly the same as hernia, plus a special provision for drainage. If we should find a leak in a mill-dam, we would not attempt to repair it while the pond was full and running over the top of the dam, but would run the stream of water out through gates over which we had control until we had repaired the break in the dam. This seems to be the principle involved in the cure of fecal fistula.

The field is septic; therefore we cannot effect primary closure of the fistulous tract itself, as a rule. We must, therefore, prepare to carry off the stream of fecal matter through a channel which may afterwards be closed by natural forces while the break in the wall is being mended. If we drain directly, we have the same fistula as when we started. In fact, if we insert drainage in any direction so that it reaches the actual fistula, there is some danger of creating a cicatricial drainage-tract, which is hard to close. In this study two conclusions are reached as to surgical principles. First there must be an irresistible tendency on the part of the peritoneum to cling to its abdominal wall. This is brought about by two forces:

One is the normal resiliency of the hollow abdominal organs, which is known as intra-abdominal pressure, and the other is the great power of the subperitoneal connective tissue to hold the peritoneum in contact with the muscular wall of the abdomen loosely and yet persistently. For instance, if the uterus is attached to the loose peritoneum which has been detached from the wall, it is found in six or eight days that in what we left an open space there is an exudate which binds the peritoneum back to the abdominal wall and holds up the weight of the suspended organs. Six months later, the exudate has disappeared, and an excess of subperitoneal connective tissue has taken its place, holding the peritoneum more solidly to the wall than normal.

Secondly, it is observed that in doing abdominal operations in which virulent sepsis is encountered, if sufficient drainage is inserted into the cavity and allowed to come out through the lower end of the wound, no matter how large the rest of the wound may be, by using layer sutures it can be closed in the presence of sepsis with almost as full assurance of getting primary union as if the wound had been perfectly aseptic. Ample drainage takes place between the layers, thus protecting the sutures and closing the space as soon as the sepsis has been eliminated.

Taking these observations as a basis, I formulated a method of treating fecal fistula. If the

*Read at the Annual Meeting of the Montana State Medical Association, July, 1919.

fistula is discharging profusely, it is well to first pack a strip of gauze into it, and then take the following steps:

1. Dissect out the old scar down to the fat and make an incision around the fistulous tract, including a small strip of skin; direct the point of the knife slightly away from the fistula so that it first comes into contact with the aponeurosis, about half an inch away from the fistula, in order to avoid the possibility of opening the peritoneum. This incision should be long—from two to three inches above and the same distance below the fistula—in order to give ample room for separation of the layers. (Fig. 1.)

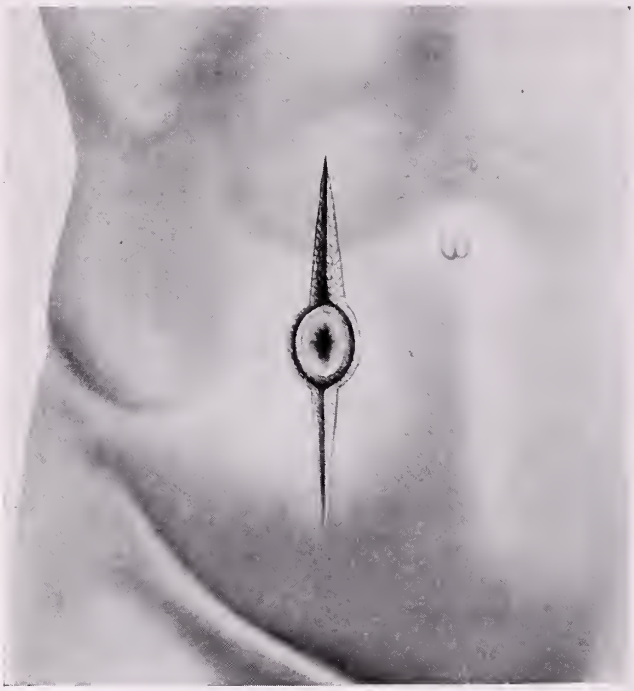

Fig. 1. Incision for freeing the fistula from the abdominal wall and separating the layers of the abdominal wall.

2. Dissect up the fat from the fascia for as much as two inches on either side of the incision. Draw it back clear of the fat, off the aponeurosis.

3. Make an incision through the aponeurosis, beginning at the upper end of the wound and coming toward the fistula. Dissect the aponeurosis from the muscle for at least two inches on either side of the incision.

4. Dissect the muscle from the peritoneum in the same manner, so that the peritoneum hangs loosely with the fistula standing up in its center like a volcano and its crater. (Figs. 2 and 3.)

5. The little margin of skin which has been left with the edge of the fistula is now trimmed off.

6. If the wall of the fistula is hard and cicatricial, making it difficult to turn it in, it is well to make an incision part of the way through the cicatricial tissue so it may turn in easily. (Fig. 2.)

7. The edges of the fistula are turned in with linen sutures, which are knotted on the inside. (Fig. 4.)

8. A second layer of chromic sutures brings the edges of this incision and the connective tissue over the peritoneum along with the scar tissue, covering the turned-in fistula to add temporary strength and bulk to the closure. The peritoneum and the rest of the wound is now thoroughly mopped or irrigated to make it as clean as possible. (Fig. 4.)

9. Silkworm-gut sutures are passed through the skin, fat, fascia, and a portion of the muscle

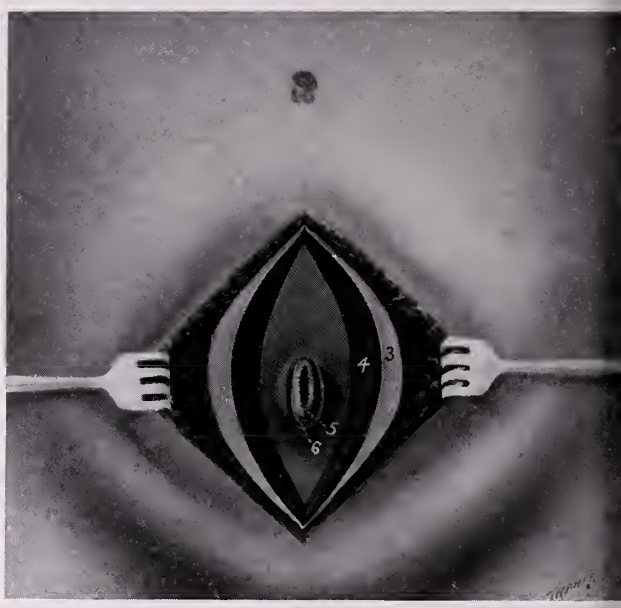

Fig. 2. Fistula freed, and layers of the abdominal wall separated ready for closing.

about one-half inch or more from the edge of these layers and left untied, space being left at each end of the wound for drainage. (Fig. 5.)

10. Suture the muscle loosely with a continuous catgut. (Fig. 5.)

11. Suture the aponeurosis with a strong double catgut. (Fig. 5.)

12. Suture the skin with a horsehair buttonhole stitch. (Fig. 5.)

13. Place drains at each end of the wound. These drains we usually make of double rubber tube and extend down to the peritoneum. (Figs. 5 and 7.) A roll of gauze is laid along the wound, and silkworm sutures are tied over the gauze.

Figure 6 shows a cross-section through the fistula, in which is represented all of the different layers of sutures, all the different layers of abdominal wall, and the spaces between the layers which have resulted from the dissection, and which spaces are for the purpose of draining away septic materials from the sutures. The lateral spaces between the fat, fascia, muscle, and peritoneum serve as drainage channels to conduct any septic material or fluid around the line of sutures to the drain at the ends of the wound. (Figs. 5 and 6.) The sutures are represented as interrupted sutures for the purpose of illustration, but they are actually placed as a series of continuous sutures.

Figure 7 represents a longitudinal section

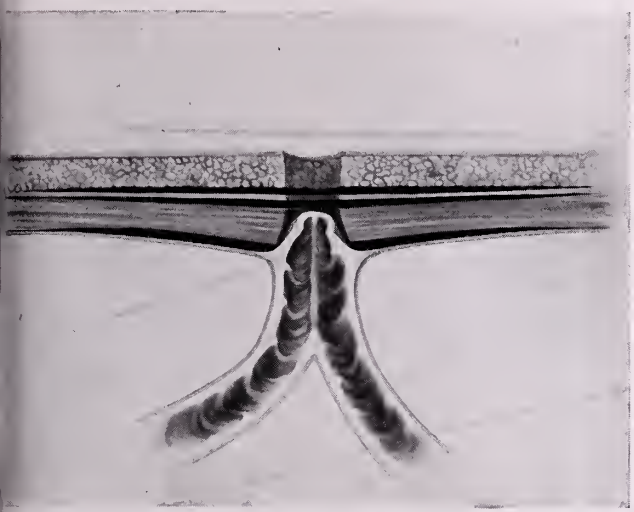

Fig. 3. Sectional view of the fistula freed, and the layers of abdominal wall separated ready for closing.

through the fistula, which corresponds to the upper incision in the abdominal wall. This figure is made to represent the effect of sutures holding the various layers of the abdominal wall together, without actually showing the sutures. The arrows represent the direction of drainage towards the tube. Small arrows inside the abdominal cavity show the direction of intra-abdominal pressure, which gently but persistently forces the fluid in the direction of the drainage tubes. The spaces above and below the fascia illustrate the method by which the lateral spaces are brought into contact with the drainage.

These sutures are allowed to remain for about two weeks before the horsehair and silk-worm gut are removed. At the end of this time union of the abdominal wall should be perfect. In the meantime any material which may have come from the fistula has been carried beneath the peritoneum and delivered to the surface through the opening at the point of drainage. At the same time a substantial granulation wall has formed around these tubes, leaving a sinus through which any further drainage from the subperitoneal space can take place. It matters not if the fistula leaks; in fact, if a certain amount of fecal matter and gas does escape at the point of these drainage-tubes, it simply shows that we have a good indirect sinus formed, which we know will heal in due time.

This method of closing a fecal fistula is invariably successful, no matter whether the fistula comes from a small intestine or a large intestine, provided it is located at a point where the layers

Fig. 4. Closure of the intestinal fistula.

of the abdomen may be dissected entirely apart, as shown in the technic, and provided, of course, there is no obstruction below.

In case previous operations for a closure of the fistula have been done, it is sometimes found that a great deal of scar tissue is present, and that the normal layers constituting the abdominal wall have been largely destroyed. This condition is sometimes found to exist to such an extent that it is impossible to separate the abdominal wall into its various layers. In such cases it may be difficult or impossible to close the fistula by the extraperitoneal method. I do not know just how many we have closed by this method, but there has been a considerable number, and we have had this condition which prevented closure in only one case.

In connection with this paper I want to call attention to the fundamental principle in this operation,—the principle of indirection or indirect

drainage. The essential points in this operation are as follows:

First, the abdominal layers should be separated for sufficient distance from the line of sutures to provide ample drainage around the line of sutures between the various layers.

Second, the drainage must be at remote points from the original fistula.

Third, the layers must not only be sutured individually, but all of these layers must be included collectively in a row of interrupted silk-worm sutures which pass around the lines of sutures of the three principal layers of the abdominal wall.

Fecal fistula, at the time the above mentioned was written, and published in the *Annals of Surgery* (1907), occurred quite frequently from drainage operations in cases of abscesses following appendicitis, or following surgical operations in which the intestine had been injured, or accompanying tuberculosis or malignancy of the bowel. At the present time we have very few fistulæ following appendix operations, owing to the fact that the operation is done nowadays before an abscess is definitely formed, in most cases; but we today make frequent therapeutic fistulæ, which are to remain open for a few months or years and are finally closed. This enlarges the field for the closure of these fistulæ by indirection. In fact, an ileostomy or a colostomy, performed with a view of re-establishing the continuity later on, or performed for the purpose of turning aside the fecal contents for the purpose of putting certain portions of the bowel at rest while therapy is applied to the diseased part, can all be closed without opening the abdomen by this method; but it is far easer to do this if the ileostomy or the colostomy is done with this in view. (For the method see Transactions of the Western Surgical Association, 1916.)

During the past few years we have treated a number of cases of ulcerative colitis by bringing the ileum to the surface for a period of time varying from a few months to several years. After the colitis has been healed, we may either close the fistula, by the foregoing method, if it is an ileostomy opening, or cut off the proximal intestine and implant it in the sigmoid. In a case of tuberculosis involving the cecum and lower ileum, and another ulcer involving the sigmoid, in the same patient, I have brought out the ileum without trying to cure the tuberculosis of the bowel by putting it at complete rest. We have had success before in such a case. In certain cases of gangrene of the bowel it is necessary to bring about the two ends and quit the operation very abruptly, in order to avoid too great shock to the patient. In other cases it is necessary, in treating a fecal fistula, to open up the bowel higher up, creating another fistula, which remains active and thereby puts at rest all the bowel containing the other fistula until the primary fistula has been healed. Apropos of this condition I quote a very striking example. The patient, a married woman, aged 32, came to me for treatment for what appeared to be a very serious condition. She gave a history of having an ovarian tumor removed about July, 1916, one and one-half years prior to the time she came

Fig. 6. Cross-section showing how all the lines of sutures are enclosed in the silk-worm sutures, which are held over gauze which obliterate spaces and allows drainage to either side between the layers.

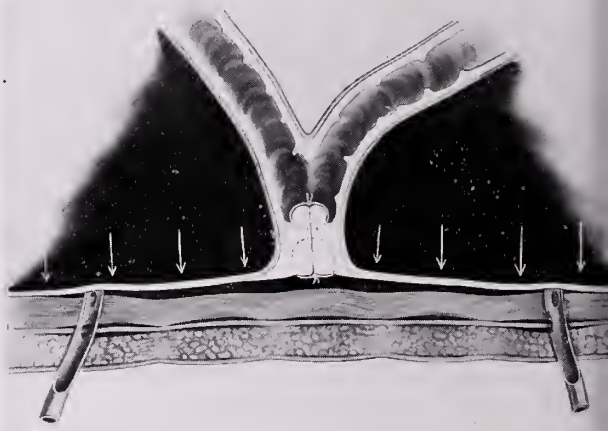

Fig. 7. Longitudinal section of the completed operation, showing how the spaces drain around the ends to the tubes.

to me. The operation was done for an ovarain cyst. One and one-half years later the cyst apparently returned, it being an intraligamentous cyst. At this time the surgeon who did the operation found extensive adhesions of the sigmoid to the tumor, and, in separating them, he tore its mesentery and destroyed the circulation of the sigmoid, so that he had to do a resection. The cyst seemed to be infected; the entire wound was infected with fecal matter and the contents of the cyst. An end-to-end anastomosis was made after the sigmoid was removed, and the patient was put to bed in a serious condition. In the course of a few days the abdominal wound opened, and fecal matter began to discharge. Before this discharge, however, the abdomen became large, as if a tumor had developed in it. After it was open, fecal matter discharged very freely through the wound, and also discharged through the rectum. When the patient came to us, on January 6, 1918, she was in what appeared to be a certainly fatal condition. This was three months after the fistula had formed. The lower portion of the abdomen seemed to have a large accumulation of some kind in it. She had a fever of 102° or 103°, with a pale, waxy condition, indicating that the fistula might be either tuberculous or malignant. She was too weak to make serious investigation. It was necessary to take immediate action, so, under local anesthesia, the transverse colon was brought up through the left rectus muscle above the umbilicus; the limbs were sewed together; and the knuckle was brought to the surface, preparatory to closure later by the Mikulicz plan combined with the extraperitoneal method described above. The bowels discharged through this wound. The patient improved somewhat, but not enough to give reassurance. Finally her condition became stationary. We decided it was time to attempt to remove the condition and close the fistula below.

On opening the abdomen the entire pelvis and lower part of the abdomen were filled with fecal matter,—a gelatinous substance, pus, and whatnot. The proximal and distal ends of the sigmoid, which had been sewed together at a former operation, had separated for a distance of probably an inch, so that, while most of the fecal matter came out through the abdominal incision, a portion of it went down through the rectum at times. The contents of this mass were scooped out; the pelvis cleaned out as much as possible; and the two ends of the intestine brought together in the midst of this material and sewed together with chromic catgut sutures interrupted. No attempt was made to make the union watertight. A very large tube was first passed into the intestine, one end extending about four inches above the point of separation, the other extending down through the rectum and out through the anus, where it was pinned to the buttocks with a large safety pin. The ends of the intestine were then sutured, as above stated, around this tube. The omentum was freed and brought down over the sigmoid at this point and back around it and tacked to the sigmoid for some distance below the point of union, but left enough space under the omentum to allow the escape of the septic material from the neighborhood of the sutured intestine to the drain later to be placed. A large quarantine pack was then placed in the pelvis quickly to take up the remaining contents of the mass which we had just removed. Rubber tissue was placed above the gauze pack so as to keep the intestines away from the wound. The patient was very ill for a few days, but she gradually began to gain strength, the bowels moving through the transverse colostomy opening. The gauze pack was gradually removed, and finally at the end of two weeks the rubber drain was removed. She remained in bed for six or eight weeks while the wound at the lower part of the abdomen closed. The large tube passing through the rectum up into the sigmoid was allowed to remain a little more than three weeks.

The important points in this operation to be noted are the following: The intestines were brought together over a tube and sewed, with the idea of keeping the mucous membrane approximated as well as possible without hope of primary union. The omentum was placed over the line of union for the double purpose of furnishing plastic material for healing and to prevent the pack or drain from coming into direct contact with the line of sutures, while the space under the omentum permitted drainage to the pack. The quarantine pack served the purpose of draining away the infected contents of the abdomen and holding the intestines back from the infected field.

At the end of about eight weeks the wound had practically healed. Water injected into the distal end of the tranverse colon from the colostomy opening passed out through the rectum, and when injected into the rectum would pass out through the distal segment of the transverse colon at the colostomy opening. This was permitted to go on for four months after the patient went home. which amounted to six months

after the first operation. On the patient's return at this time water was injected, as just stated, and the continuity of the intestines seemed to be thoroughly established. The fistula and the drainage wound from the pelvis had entirely healed and become solid.

We were not yet sure as to whether a union of the sigmoid was of such a character that we could rely upon it to turn the full fecal current through it, so we put on a clamp to destroy the septum in the loop of transverse colon forming the colostomy. After this septum was destroyed the fecal contents began to pass down through the large intestine through the sigmoid, and the patient had formed stools. In other words, our anastomosis had been formed under great difficulty by the use of the tube and drainage. After this was thoroughly determined for a few days, we closed the colonic fistula by the remote or indirect-drainage method described above. (See illustrations.) The patient has been well now a year, and is apparently in good condition.

In this case we used the principles of indirection very freely. In the first place we sidetracked the entire bowel contents. In the second place we sutured the intestine in the presence of pus and fecal matter, and covered it with omentum while we drained the surrounding area, and even drained the area from sutured intestine ends under the omentum with a quarantine pack, thus removing the cause of the fistula, also the pathology by indirection, and closing the original fistula by indirection and finally closing the temporary fistula by indirection. So far as we can see there was no possible way by which we could have closed this fistula by any form of direct attack, and this but illustrates a desperate type to which this procedure is applicable.

In connection with intestinal obstruction and gangrene of the bowel, I may quote another very difficult case. The patient, a woman, aged 50, had had several operations, first for appendicitis, and two others had been done for intestine obstruction. The obstruction had not been relieved. She came to my associate, Dr. Sears, who, fearing the difficulties of another operation in the presence of so many adhesions, attempted to build up the patient to a better condition, and succeeded in bringing her weight from somewhat over sixty pounds to nearly one hundred pounds, but was never able to get her to the stage where she could take normal diet, nor could she get to the point where she could leave the bed. At the request of Dr. Sears I opened the abdomen, and found a number of knuckles of bowel adherent to various places, which might have been the cause of her obstruction. Dissecting the intestines further down into the pelvis, I opened an abscess which connected with a loop of bowel. The ileum had at some time become attached to the pelvic abscess, or had sloughed, forming a pelvic abscess, so the two ends of the ileum were quite separate on the distal side. At this time we had the bowel open at a very septic portion and had this large pelvic abscess open. Such a thing as direct anastomosis, of course, was impossible. The patient was in a very serious condition, and therefore a tube was inserted into the proximal ileum and also another tube through a very small piece of distal ileum through the ileocecal valve and into the cecum. These intestines were pursed around the tubes, and the two intestines sewed together. The tubes were drawn out through the lower end of the incision, and a quarantine pack was placed so as to completely protect the pelvis by preventing the loops of intestines from coming down. A large number of gauze wicks surrounded above by rubber tissue kept the intestines away from the openings. About six days after the operation, fecal matter began to escape around the tubes. Finally the tubes came out, the gauze was removed, and a long clamp was placed, one blade in the ileum and the other in the cecum. Pressure was gradually brought down until the septum between the two intestines was cut for about six inches. Finally the protective rubber tissue was removed, and we had a fecal fistula, through which practically all the contents of the bowel escaped. The patient was then fed up as well as could be, and gradually gained flesh and weight. The fistula became narrower up to a certain point, and a certain amount of the fecal contents was passing through the rectum. The intestinal mucous membrane, however, had grown gradually to the skin, making a permanent fistula.

About four months after the original operation we closed the fistula by remote or indirect drainage method. (See illustration.) The patient gradually recovered. The continuity of the intestine was entirely restored.

This will be sufficient to represent and illustrate all of that type of cases in which the emergency demands the bringing to the surface of an inestine in an infected area, such as gangrene, various forms and degrees of intestinal obstruction, etc.

THE ANTITUBERCULOSIS CAMPAIGN AND THE WAR*

By Walter J. Marcley, M.D.
Major American Red Cross and Chief Physician American Red Cross Commission to Switzerland 1918 and 1919
MINNEAPOLIS

In 1914, when Europe was plunged into the Great War, the antituberculosis campaign was the most vigorously prosecuted organized effort in the world's work against disease. I wish, briefly, to go over the status of this campaign at that time in the nations at war and to trace, so far as this is possible, the effects upon it of the events of these five years.

We were wont to point to Germany as the leading nation in inaugurating the fight against tuberculosis; and we were right in doing so. The campaign which we know today in its many lines of activity began with the medical treatment and cure of the disease, began with the establishing of sanatoria for treatment. Brehmer, in Germany, was tuberculous, recovered his health, and later started the first successful sanatorium. Trudeau, in this country, had tuberculosis, went to the Adirondacks, regained his health there, and established the first sanatorium in the United States. The well-developed methods of prevention and cure in Germany had cut the death-rate in two in fifty years. The number of existing sanatoria[1] and hospitals for this disease is a fair indication of the progress then made in the campaign by any country. The following data show the conditions in the country named in 1914:

Germany had 146 sanatoria, of which 119 were for the poor, with a total of 16,200 beds. Seven additional sanatoria were in process of construction.

Austria-Hungary had 8 sanatoria.

Belgium had 7 sanatoria for the people and 2 additional in construction.

Italy had 8 sanatoria and another of 800 beds about to be built at Milan.

France had 12 sanatoria for adults with a bed capacity of 1,162. Her contribution to the campaign in the early days was the seaside treatment of children. While Germany was building institutions for adults, France demonstrated the beneficial effects of open air and sea bathing for tuberculous children, and won the honors as the pioneer in this phase of the work. Many of the world's leaders in the antituberculosis movement have been, and are today, French physicians.

Great Britain, in 1914, had 74 sanatoria and hospitals, of which 59 were for the poor. They had a splendidly organized campaign, similar to our own and including a staff of special tuberculosis health officers for each county.

Russia had 22 sanatoria with a bed capacity of 880, which, when compared with Germany, taking into the consideration the population of each country, shows that the provision in Russia was one-fiftieth of that in Germany.

Roumania and Serbia, so far as I have been able to learn, had made no provision for the tuberculous.

In this hasty review I have but touched upon the conditions then existing in other countries. You are familiar with the well-organized antituberculosis campaign that was carried on in the United States. I will mention only the following facts, as indicating our progress in the work: We had 680 sanatoria; over 1,300 associations and committees for the study of the disease and to carry on educational work; and a vigorous National Association, then thirteen years old. What we had accomplished is shown in a greatly reduced death-rate in the older communities,—for example, in Massachusetts the death-rate from this disease had been reduced 60 per cent in thirty years.

Minnesota, when we went into the war, had taken her place among the most progressive communities in this health movement. Our county sanatorium law was, I believe, the best in this country; and our housing law was recognized as the best in the United States. Our sanatoria which had rapidly grown in number since the passing of the county law were doing effective work. A broad educational campaign was being carried on by the various organizations, both official and voluntary, state and local.

Now, what has been the effect of the Great War on the antituberculosis campaign in the various countries at war? During the years of the war, this disease has been, as it was previous to the war, a problem of first magnitude, but we have found it to be a problem of civil population, rather than a military problem. Before we went into the war it was reported that France had on her hands a very serious tuberculosis problem in her army. Upon further study of the conditions existing, the impressions received from the first reports were greatly modified. The efficiency of the medical service in the army of France has

*Address delivered at the Annual Meeting of the Minnesota Conference of Social Workers, at Red Wing, Minn., September 22, 1919.

been, and is, on a very high plane. Dr. James Alexander Miller[2], of New York, Director of the Rockefeller Commission in France, has made an exhaustive investigation of this subject and has published his findings.[3]

During ten months' service with the Rockefeller Commission and the American Red Cross in France, in 1918, working in hospitals and dispensaries, I had an opportunity to see something of the conditions in that country. My official duties, later, in Switzerland for several months brought me into close relations with many refugees from other nations at war. My work in Switzerland was carried on under the inspiring leadership of Dr. Alfred Worcester, of Boston, president of the Massachusetts Medical Society, who was in Switzerland as Commissioner and Director of the Department of Civil Affairs for the American Red Cross. During the early months of the war in France, when men were mobilized without deliberate examinations, 1.75 per cent were discharged for tuberculosis, but in later years only 0.63 per cent were discharged for this cause. In comparison with the findings in our own army it is interesting to note that we discharged 0.78 per cent for tuberculosis. As a matter of fact the number of cases developing in the French army was not greater than that found in a similar group of young men taken from civil life by draft in the United States. Moreover, French physicians have found that the physical condition of the soldiers is much better than that of similar groups of Frenchmen mobilized in industry or in their normal civil life. A discussion in the French Senate in July of this year brought out the fact that 25,000 soldiers of France had died of tuberculosis during the war and 120,000 had been exempted from service because of the disease. When we turn to the civilian population we find there also less tuberculosis *up to the present time* than we at first were led to believe the war had produced. For example, the civilian refugees and repatriates[4] coming back through Evian had an incidence of tuberculosis of only 0.4 per cent.

If we base our observations wholly upon recorded death-rates and the apparent incidence of disease, omitting from consideration the question of prevention looking toward the future death-rate, we conclude that *up to the present time* there is no evidence to show that the war has increased the seriousness of the tuberculosis problem in France. However, the picture of the future is quite different. Tuberculosis is not an acute disease, and it does not usually develop rapidly. The abnormal conditions during the years of the war will surely increase the seriousness of the problem in the immediate years ahead. No new buildings have been erected in France for five years, and the housing conditions are worse than before the war. The refugees, large in numbers, have been crowded into the available homes and into unsuitable shelters. There has been a drafting into industry of young women who have worked hard at unaccustomed labor and whose living quarters have been far from suitable. The food conditions, which all through the war and up to the present time have been very good (France has at no time been underfed), are now showing signs of becoming inadequate, and are causing much anxiety on the part of those interested in the welfare of the people. It is impossible to estimate the ultimate effect of the tremendous sorrow and the mental distress of those brave people. One-tenth of the entire population refugees! More than a million homes plunged into mourning!

When American tuberculosis workers went to France two years ago they were surprised to find the French doing so much for themselves. For some months after the war began, tuberculous soldiers discharged from the army were sent back into the community. This was soon found to be unwise. In October, 1915, a law was passed which provided institutional care for tuberculous soldiers, and a National Association for follow-up work was organized. Another law, passed April, 1916, facilitated the extending of dispensaries. The American people have done much, through the Red Cross and the Rockefeller Commission, to give relief to the war sufferers in France. Perhaps the most important work we have done, and which we continue to do, in France is done by an educational campaign by means of travelling exhibits with lectures, etc.

I think we may fail to appreciate the fine spirit of the French people as shown in their genuine hospitality manifested toward the refugees from the neighboring countries. They opened their homes, their hospitals, and their purses to these unfortunates, and placed them upon the same footing with the refugees from their own northern departments. The generosity of the English people toward the French people stands out also as a fine expression of genuine friendliness. At various times large sums of money have been raised in England for the relief of French soldiers and refugees. I was told by a lady from

Scotland, devotedly caring for the tuberculous French soldiers at the Bligny Sanatorium (near Paris), that on so-called French Day last summer twenty million francs were collected in England to relieve the sufferers of France.

Pulmonary tuberculosis in the British Army had been almost a constant factor for fifteen years before the war. So far as we are able to judge from available records, we may conclude that the conditions of the present war have not increased the percentage of tuberculosis in the British army. Elliot[2] reports for Canada that "the incidence of tuberculosis in the Canadian army in service of nearly four years is shown to be from 20 to 50 per cent less than in civilians of the same age." With the civilian population in England there has been a noticeable increase in deaths for the years 1915, 1916, and 1917, and more marked among young women from fifteen to twenty-five years of age than among men (reports available are for England and Wales only). This is undoubtedly due to the extensive employment of young women in munition plants and other industries, working under unaccustomed stress. Miller, after a complete study of reports and other available material, refers especially to a report made to the Ministry of Munitions by Capt. Greenwood and Dr. Tebt. I quote from Miller's summary: "In rural districts this increase among women of this age is not shown. They conclude that certain occupations among city dwellers show results only to be explained by the assumption that such employment introduces a special factor which favors the development of tuberculosis. They also conclude from their investigations that domestic overcrowding is not a sufficient explanation of the increase of tuberculosis, because such overcrowding is very common in many rural districts and because their special field investigation does not show this overcrowding as the primary factor (statistically, at least). This is particularly interesting, not so much as disproving the influence of overcrowding, but rather as placing the greater emphasis upon the role of unfavorable industrial conditions."

Shortage of food in England has not been a factor in the causation of this increased death-rate, as the supply of food has been sufficient and very carefully distributed.

It is surprising to find that the incidence of tuberculosis in the Belgian army during the years of the war was only 75 per cent of that before the war, although the Belgian army had a very low death-rate from this disease before the war. When we turn to the civilian population we find, however, a marked increase in the death-rate in 1917 over that of 1913 and 1914. For Antwerp the increase was 94 per cent and for Liege 102 per cent. As you know, the serious problem in Belgium has been the matter of food supply. This has been a striking contrast to the food conditions of France and England. The after-war program for tuberculosis has been well thought out, and plans have been made for carrying it into effect. Miller remarks: "The little that this country [United States] has done and can do to help this heroic people fades into insignificance when we realize what they are doing to help themselves."

A study[4] of the situation of the Serbian refugees in France very soon revealed the fact that a very large percentage of them were tuberculous. Their needs were so largely of a health character, and especially that of the treatment and prevention of tuberculosis, that the entire relief problem was placed under the Tuberculosis Bureau of the American Red Cross. Serbian doctors report that even before the Balkan Wars tuberculosis was on the increase in Serbia. The percentage of men rejected for military service on account of this disease was extremely high. These refugees, as I have said, as were also the Belgian refugees, were received by the French Government and the people with the greatest sympathy. The Government supplied the needy with lodgings and food. They were admitted to the hospital on the same footing with French refugees,—the usual daily pension of 1 fr. 50 was given them by the Government. In Switzerland we had many of the Serbians on our list,—tuberculous officers sent by their Government to take cure in the mountain resorts; and students whom the Government had sent to the Universities of Switzerland, and who, having failed in health and being unable to receive further financial aid from home, came to the American Red Cross for help. Many of these officers were very ill, and some of them died. In midwinter, in spite of their serious physical condition and against all protests on our part, many of these officers were officially ordered back to their country. I was told by them there were no institutions in Serbia, and they had no prospect of continuing their treatment. You know how the Serbians suffered in the early days of the war, how 400,000 refugees (one-seventh of the entire population) crossed the frontier into Albania and Montenegro, and how mothers sent their boys of

ten, twelve, and 14 years of age because the older boys had been called to the colors, and under the protection of the allies a new effective fighting force was to be organized, and the soldiers of the future must go, too. While 35,000 of these children left their homes, only 10,000 reached the sea. These brave people, now riddled with tuberculosis and much of their country devastated! Their military campaign of December, 1914, with the retaking of Belgrade, is chronicled as one of the most sweeping defeats of the Central Powers inflicted by any of the allies.

If the United States wishes to join the other countries in helping to preserve Serbia as a nation, it is essential that we continue to give relief and to help them to get under way some organized method of combating tuberculosis. One of my friends in Switzerland is a Serbian physician whose bright dream for the future is to recover his health, return to his native land, and establish a sanatorium and organize antituberculosis work.

What can I say of the Roumanians, the Montenegrins, the Poles, the Lithuanians, the Czecko-Slavs, the Russians? Many of these people were under my care last winter in Switzerland. Many had been in Switzerland for several years being treated for tuberculosis at the various sanatoria. Before the American Red Cross began giving financial assistance to them a great deal had been done for them by the people of Switzerland. Every patient had his own appeal. Many were dear little Russian children getting well under the wonderful effects of the sun at Rollier's sanatoria. It was good to see those youngsters lying nude in the sun; to see the crooked backs becoming straight; to witness their apparently perfect contentment, although some of them had lain in bed for three or even four years. Surely, somehow the goodness of the sun's rays had penetrated into their dispositions. In many instances no word had come from parents in Russia for months, even a year or two, and, alas! nobody knew whether they still had homes and parents. Many Russian adults were in the same sad condition. They were splendid people—cultured, refined, sick, penniless, full of courage, waiting and hoping for news from home. If any of you have any doubt about our duty with regard to continuing to extend to them a friendly helping hand I wish you might see the pictures which I see and cannot forget—and would not—pictures of conditions in their home countries which their vivid words made real to me. Statistical reports for Poland, Russia, and the Balkans are not available; but we know from the recitals of individuals how great is the need in all those countries for antituberculosis endeavor.

The antituberculosis campaign in the United States has suffered during these years of the war by the unusual calls that have been made upon its workers. The sudden need of tuberculosis examiners for the army, and the entrance of many physicians and nurses into the service, created abnormal conditions, and thus retarded the work in various ways. Tuberculosis has not been a serious problem in our army, either in this country or in France. Undoubtedly, the manner in which the Surgeon-General met the need at the time the men of the country were mobilized so rapidly, and the work of the large corps of tuberculosis examiners for army service, are responsible for the fact that so few men in our army developed tuberculosis during service in France. On the whole, the effect of the war upon our campaign here will undoubtedly be seen in the general awakening which has come everywhere as a result of the disclosures made by the various examining boards. Recently the second annual report of the Provost Marshal General was issued, and it is the most complete index of the nation's vitality that has ever been published. It covers the examinations of 3,208,446 men, from February 10 to November 1, 1918. Of this number 35 per cent were rejected for military service. Some of these men were considered suitable for home service or for development, *but 21 per cent were discharged as totally unfit for any military service whatever;* and of the latter number 8.5 per cent were found to be tuberculous.

What lessons has the war taught us which we can apply in our antituberculosis campaign? It seems to me we have learned no new lessons. The lessons taught by repeated experiences have been emphasized. We may be led to modify our views somewhat in the light of the events of the past five years in Europe and America. We should endeavor to keep alive the more general interest that has been aroused as the result of the universal physical examination of our own men for the army.

The incidence of tuberculosis in European countries, especially among the civilian population in Belgium, perhaps should teach us something with regard to the value of food in the prevention of tuberculosis. We may properly question whether we have stressed sufficiently a careful study of the food problem among our

poor classes and the effect of undernourishment as a causative factor of the disease.

The life in the army, undoubtedly, has shown the value of a regulated, supervised outdoor life. The life of the soldier in the various armies has often submitted him to unusual physical exercise, and, when we consider that the development of tuberculosis in the army has not been any greater and in many instances has been less, than the incidence of tuberculosis in civilian life, we may learn that a more vigorous open-air life in the so-called "pre-tuberculous" individual is perhaps desirable. French physicians believe that they have observed beneficial effects in the French army upon cases of quiescent tuberculosis. The very important lesson of the great value of periodic physical examinations cannot be emphasized too strongly. Such examinations have long been considered essential by antituberculosis workers. Upon this depends early diagnosis in the people at large with a consequent larger percentage of arrested and cured individuals. The war has taught us anew that industrial conditions in factories and other working places must be very carefully considered in the causation of tuberculosis, and also that we must have laws to prevent unhygienic conditions in factories and to prevent the employment of women and children in occupations unsuited to them physically.

We hear considerable nowadays about occupational therapy and we may erroneously suppose this to be a new development of the war in the treatment of tuberculosis. For twenty years we have employed various kinds of occupations in the treatment of tuberculosis. In the sanatoria in this country and in Europe, exercise, as well as rest, is emphasized in the treatment of this disease at the proper time and regulated to suit the individual. This element in treatment has been highly developed in certain institutions, notably at the Eudowood Farm Colony in Maryland, where the work has been going on for ten years. Today, with the stress being laid upon occupations for the tuberculous soldiers, there is fear of employing this element of treatment unwisely, and, as a consequence, much harm may be done to the individual. The men who are directing occupations for the tuberculous are united in believing that absolute rest is essential at certain times in the treatment, and that exercise of any nature whatever should always be very carefully prescribed. In a recent issue of one of the Minneapolis papers there appears a reference to occupational therapy. The heading of the article was in large type and called attention to the establishing of a new treating center for tuberculous soldiers in Massachusetts. I quote from the article: "Mathematics, English, drafting, gardening, poultry raising, bookkeeping, chemistry, and gas engines are among the favorite courses for convalescents. It is interesting to watch the temperature and pulse return to normal when the tuberculous men begin the curative work." It is dangerous to suggest that poultry raising and gardening may be good treatment for a man who has a temperature and pulse-rate above normal, and I believe this would be the suggestion that any tuberculous man might receive from reading the article just referred to. The physician who has charge of this special treatment center above referred to, happens to have been one of my former assistants in Massachusetts; and I am thoroughly familiar with his method of treatment. Within the week just passed he has written me a letter on this subject. I am confident he prescribes work with great care, indeed, and that he believes, as we all do, in rest as an essential for patients with fever.

We have learned that men in active service who have been gassed or who have suffered from chest wounds have been less apt to develop tuberculosis than we first feared would be the case.

We have learned again the lesson—and it has been borne in upon us as never before—not only that our antituberculosis campaign is nation-wide, but that it allies us with our fellow workers across the seas. We Americans are involved in the unrest of the world, and we cannot withdraw from it. As the needs of our allies in Europe are greater, in like measure our opportunities and duties are greater. In our campaign for the prevention of disease, we have signed no armistice with the enemy. Allied today, as never before, with our friends in Europe, we go on making war on tuberculosis; and there is no treaty of peace, and there will be none.

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TONSILLECTOMY

By Wesley Bishop, M.D.
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Since the doctrine of focal infection was promulgated, increased attention has been attracted to the tonsils. Ideally situated for the reception of pathogenic organisms and providing a natural incubator for their propagation, it is natural that our attention should be directed to this region early in our search for the causal factor of disease, suggesting some focal point of infection for its origin.

Granting that we are correct in our theory of the transmission of germs or their products from focal points to more remote parts of the economy, it becomes of first importance that the suspected focus be eliminated, and, inasmuch as our present-day knowledge offers no method of sterilizing the infected tonsil, our recourse must be to surgery, and the infected node must be removed.

So much has been written descriptive of the operation of tonsillectomy that it would seem superfluous to offer any addition to the subject, but the almost daily presentation of evidence that the operation is performed in an incomplete manner in a great number of cases, lends one courage to add a word to what has already been written.

Judging from personal experience and from the expressed opinion of others who have been interrogated, it is concluded that fully 75 per cent of so-called tonsillectomies are incomplete. Post-operative examination of patients claiming to have had their tonsils removed has revealed tonsil remnants in greater or lesser amounts.

Obviously, the internist may be led astray if in his search for the cause of some obscure condition he assumes that the tonsillar condition may be excluded owing to a given history of tonsillectomy having been performed. Unless a clean, complete operation has been performed, the possibility of infection continuing from remaining tonsil remnants must be considered.

One asks why an operation, seemingly simple and certainly so considered by the majority, laity and profession alike, should be in such a large number of cases unsuccessful from a surgical standpoint. Several reasons present themselves to mind, each of which may have some influence in determining the operative result.

The current opinion that this operation is a simple piece of surgery has tempted many to undertake it without the special study of technic which it warrants and which is the sine qua non of success.

Because of its accessibility it is usually easy to grasp the tonsil in a forceps, and with any old instrument remove enough tissue to make a respectable showing. This, however, comes very far from accomplishing the object of the operation.

Whether or not this operation should be classed as major or minor depends entirely on the operator. To the trained surgeon familiar with the regional anatomy, cognizant of the necessity of insulting to the minimum degree the adjacent tissues, and with the dexterity engendered by practice, the operation is simple; on the other hand, to the tyro lacking these qualifications the procedure becomes very far from simple.

Undue haste in the performance of any surgical procedure is to be deplored quite as much as the prolongation of the time a patient is kept under the influence of an anesthetic. There seems to be an idea that a tonsillectomy should be performed much like a conjuring trick: "One, two, three," and there you are! Although this becomes nearly true in the case of some operators who have developed a technic which, added to their other qualifications, insures a happy result, the average operator must approach the field with a different idea. As with any other surgery this operation should demand deliberation.

The time element, although the minimum is the ideal, should not be allowed to influence the thoroughness of the work done.

Hemorrhage.—With the patient under general anesthesia, more or less bleeding is unavoidable, but here, as elsewhere, the application of surgical principles will simplify the operation. Pressure on oozing surfaces, forcipressure, or ligation will control hemorrhage. The attempt to operate with a mouth full of blood obscuring the field is, I am certain, a contributing factor in many cases of failure to do a complete operation, and many a surgeon has failed in his purpose for the lack of a little time and application taken to insure a dry field, permitting close inspection to detect tonsillar remnants, which otherwise are easily overlooked.

Seemingly simple, this operation of tonsillectomy really requires skill and practice. Given

this and a technic which recognizes certain essentials the operation should be a success in every case.

The regional anatomy is exceedingly simple. The tonsillar fossa or bed is formed by the palatoglossus (anterior pillar) in front, the palatopharyngeus (posterior pillar) behind, with the superior constrictor of the pharynx forming its outer wall. In this fossa the tonsil, covered by a fibrous capsule, is anchored by connective tissue, blood-vessels, and nerves. The mucous membrane covering the anterior pillar extends from the free border of this out over the face of the tonsil, forming the so-called plica tonsillaris.

The removal of the tonsil should be accomplished with the minimum of injury to the adjacent structures. The musculature mentioned has important function, and the wounding of the pillars or even the mucous membrane covering them may result in serious impairment of the action of the soft palate. It is to be noted that seemingly insignificant wounds of this region are often productive of scars quite out of proportion to the original injury. We have seen serious impairment in the function of the soft palate from scar tissue following cuts in the mucous membrane that did not extend into the muscular tissue.

In our practice a very simple technic is followed, and with a simple armamentarium successful end-results are accomplished.

Armamentarium.—The instruments are a scalpel, a Lee-Hurd combination dissector and pillar retractor, a tonsil forceps, a tongue depressor, hemostats and sponge-holders, and a snare.

Anesthesia.—General anesthesia is reserved for children and nervous adults. Local anesthesia is preferred, produced by a few injections (10 minim) of one-tenth of 1 per cent cocaine solution to which adrenalin chloride may be added (one drop of the 1-1000 solution to 4 c. c. of the cocaine solution), ensuring anesthesia and practically a bloodless operative field.

The Incision.—The object of the operation is to remove the tonsil from the fossa with a minimum of injury to the anterior and posterior pillars. The initial incision is important, for the whole operation may be marred by an improperly placed incision. This should extend along the free margin of the anterior pillar in its entire length, cutting through the plica tonsillaris, which spreads over the edge of the pillar on to the face of the tonsil.

The plica having been cut through, the edge of the scalpel is slipped under the edge of the anterior pillar, between it and the capsule of the tonsil, penetrating to a depth of one-half inch; then by a sweeping excursion of the scalpel the pillar is separated from the capsule. (Fig. 1.)

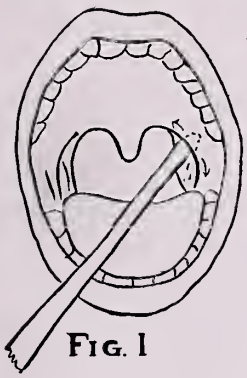

FIG. 1

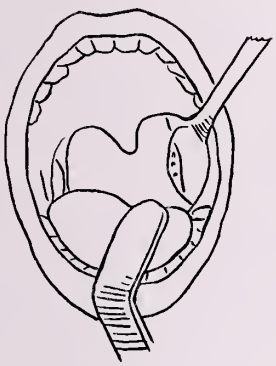

FIG. 2

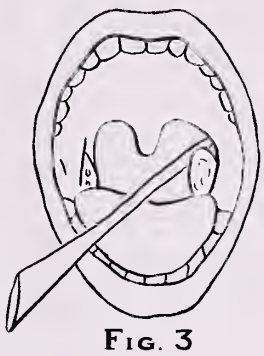

FIG. 3

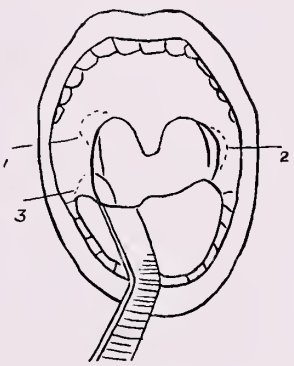

FIG. 4

It is very important that the scalpel enters properly between the pillar and the capsule; otherwise one of two things occurs—the pillar is wounded or the capsule is penetrated, the line of cleavage between pillar and tonsil is lost, and the incision, if so continued, will extend into tonsil tissue, the result being that some tonsil tissue and capsule will be left adherent to the back of the anterior pillar.

The incision having been made, the anterior pillar is retracted outwards with the retractor (Fig. 2), exposing to view the glistening capsule of the tonsil. This is grasped firmly in the tonsil forceps, care being taken to include the uppermost portion. The forceps once applied should not be removed until the operation has been completed. To this end it is important that the initial grasp be secure. If it fails, succeeding attempts to obtain a hold will result in tearing the capsule, and the friable tonsil under it

offers an ineffectual hold, incidentally obscuring the landmarks.

The tonsil, having been firmly grasped in the forceps, is now pulled downwards and forwards towards the center of the mouth. The dissector is inserted into the wound, and by a sweeping excursion made to follow the contour of the tonsil, separating it from its connective-tissue anchorage. Reaching the top of the tonsil, the dissector, still hugging the tonsil, is pushed backwards and downwards, following the contour of the back of the tonsil (Fig. 3), and incidentally separating the delicate posterior pillar from the capsule. This movement requires delicacy, as the posterior pillar is easily torn.

Should free hemorrhage occur at this stage, pressing the tonsil back into its bed will usually control it, or it may be necessary to press a sponge into the wound. Having controlled the bleeding, the field is carefully inspected to see that the tonsil is completely separated from its anchorage except at its base below. The snare is now passed around the pedicle, drawn taut, and the enucleation completed.

Very free hemorrhage may occur at this stage of the operation, but firm sponge pressure into the fossa usually suffices to control it; if not, inspection will reveal the source and forcipressure or ligation may be necessary. In any case bleeding should be absolutely controlled before the patient leaves the operating-room.

Figure 4 depicts the sites where tonsil remnants are found most frequently following an incomplete operation.

1. High up under the anterior pillar the so-called velar lobe of the tonsil often escapes. This is due largely to operating blindly under the pillar. If this is properly retracted a full view of the tonsil limits is afforded, and the upper lobe properly included in the operation.

2. On the back of the anterior pillar, as mentioned above, if the incision is not placed cleanly in the line of cleavage between pillar and tonsil capsule, it will cut into the tonsil tissue proper, leaving a portion of capsule and tonsil adherent to the back of the pillar.

3. At the base, low down near the tongue, often revealed only on decided depression of the base of the tongue, unless the dissection has been carried out thoroughly and the snare applied low down at the base of the pedicle, this portion of the tonsil will be left behind.

Illustrating the importance of a complete tonsillectomy the following case is presented:

Mrs. X., wife of a physician, had been suffering from attacks of polyarthritis. She gave a history of having had two operations on her tonsils.

At the time of examination the patient was suffering from an attack of polyarthritis of moderate intensity, the temperature varying from 99° to 101.° All the finger-joints and both wrist-joints were swollen and red and tender to the touch, as were also her knees and ankles.

Examination of the throat, which was not particularly sore, revealed evidences of tonsil remnants, a considerable portion of each velar lobe as well as a portion at each base still being in situ. These remnants were removed under the technic described, and within twenty-four hours the pain had disappeared from the joints, and within a week all swelling had subsided.

LEUCOCYTE COUNT IN CHRONIC TONSILLAR INFECTION*

By J. M. Walsh, M.D.
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WHITE-BLOOD COUNT IN CHRONIC INFECTED TONSILS

Tabulation of two hundred consecutive cases.

Group 1. 5,000 to 8,000—No. of cases, none.

Group 2. 8,000 to 11,000—No. of cases, 15, ages 4 to 41 years.

Group 3. 11,000 to 14,000—No. of cases, 43, age 5 to 40 years.

Group 4. 14,000 to 17,000—No. of cases, 73, ages 3 to 53 years.

Group 5. 17,000 to 20,000—No. of cases, 30, ages 4 to 49 years.

Group 6. 20,000 to 25,000—No. of cases, 29, ages 3½ to 35 years.

Group 7. 25,000 to 40,000—No. of cases, 10, ages 8 to 29 years.

In presenting this short tabulation, I have three objects in view:

First, to establish that a definite leucocyte increase occurs in chronic tonsillar infection.

Second, for the purpose of aiding in general diagnosis by accounting for a part of the unexplained increase in white cells where such would not exist, as in early typhoid, tuberculosis and such.

Third, to show why, in many well-defined gen-

*Read at the Thirty-eighth Annual Meeting of the South Dakota State Medical Association, at Watertown, May 21 and 22, 1919.

eral cases with a high leucocyte count, later developments fail to show pus in the suspected localities.

Methods.—Cases were classified as having a leucocytosis only when a persistent white-blood count of over 10,000 was found. No known acute cases were counted. All cases where infection in other parts of the body was known or suspected, were not listed. The chance for error was lessened by repeated counts.

All blood examinations were made in the hospital laboratory by trained technicians. A few of the post-operative counts were made in the local hospitals where the patient lived. A second count was made in about three months after the operation, rejecting all cases with other infections at the time. In all, 200 cases were tabulated. Ages range from 3 to 41 years, with the greatest number sixteen years old. In this list but two cases were found at the time of operation with a white-blood count of less than 10,000.

The highest white-blood count at the time of operation was 38,000. There were twelve with a count of 25,000 and above.

The average leucocyte count for the series was 16,700.

The post-operative count showed in every case to be under 9,000. There were but five post-operative counts above 8,000; and these all in children under ten years of age.

The average post-operative count in the series was 6,500.

CONCLUSIONS

1. A definite leucocytosis of from 15,000 to 20,000 can be expected in chronic tonsillar infection.

2. This increase in white-blood cells disappears within three months after having the tonsils removed.

3. Unless kept in mind, this leucocytosis may lead to error or confusion in general diagnosis.

DISCUSSION

Dr. E. D. Putnam (Sioux Falls): This is simply an ideal paper. It is more than a discussion of an ordinary paper on the tonsils. It is so unusual and so original that I can only compliment Dr. Walsh on his work.

Dr. Walsh has given us a very clear clinical picture of patients with tonsillar infection, and it is gratifying to know that he has found the leukocyte count so valuable in making blood-tests after operation.

Dr. T. F. Riggs (Pierre): In discussing this general subject I will say that about a year ago Dr. Walsh and I tried to look up some statistics on tonsillitis and leukocytosis. The acute cases have from 16,000 to 30,000 or 35,000. He has ruled these out. I could find little or nothing along this line in the literature in working on chronic tonsillar infections.

We have had an interesting case which illustrates the point Dr. Walsh tried to bring out. This was a woman who complained of pain in the back part of her legs. It appeared to be a typical neuritis. She had been operated on twice, once for appendicitis and once for a uterine retroposition. Her teeth were *x*-rayed, and some of them were found infected and were extracted. She gave a history of having had two attacks of tonsillitis in childhood. The tonsils were so small they could barely be seen. The leukocyte count was repeatedly above 10,000. I remember at one time it was 15,000 or 16,000. I saw this woman four or five times in consultation. Finally, this question was brought up, and it was thought there must be some infection of the tonsils to account for her trouble. The tonsils were removed, and were just like small saucers in large saucers, and between the two saucers there was a considerable layer of chronic infection. The pain disappeared entirely in ten days or two weeks after the removal of the tonsils, and has not returned. This is a case which is not included in Dr. Walsh's statistics at all, but it bears out what he has said.

Dr. L. N. Grosvenor (Huron): I desire to congratulate Dr. Walsh on his excellent paper. He has presented to us a splendid piece of research work. It is a new line of investigation, and opens our eyes to a line of thought that is new. We should get over our indifference, and put into action the means of differential diagnosis in these cases. It will not hurt us any, and may do us lots of good.

Dr. H. I. Lillie (Rochester, Minn.): I have been very much interested in the doctor's report on increased leukocytosis in chronic tonsillar infections, and I have no doubt it is an important help in diagnosis. In some cases of chronic tonsillar infection one is surprised at the number of bacteriemias in blood culture.

There is the question of a group of infections which produce leukopenia. Twelve thousand is the outside range, although there seems to be individual variations, so that it is probably on a pathologic basis.

A patient, who was chronically debilitated, or had what was sometimes called nervous exhaustion, had nothing but a chronic tonsil to be found as the causal factor, but she had a positive blood-culture. Tonsillectomy was done without particular incident. She immediately got a flareup in her septicemia and died. Some of these chronic tonsillar infections are of considerable importance, and anything we have, as Dr. Walsh has suggested, in the way of differential diagnosis, other things being eliminated, will be of great help to us.

Dr. Walsh (closing): I have nothing more to say, except to emphasize the differential diagnosis in these general conditions. Most practitioners who see these tonsils usually know that there is an increased leukocyte count, and it is just a matter of detail in working it out.

QUININE AND UREA HYDROCHLORIDE IN THE TREATMENT OF INFLUENZA AND PNEUMONIA

By Merton Field, M.D.
NORTHFIELD, MINNESOTA

With the influenza epidemic again in South America and frequent reports of its appearance in many parts of our own country, is it not well to take into account our late experiences in the treatment of this plague to ascertain, if possible, whether our treatment in any series of cases gave us results that might be of help in the future?

In an experience with several hundred cases of influenza with its complications among the lay population and as United States Surgeon to the S. A. T. C. camp at Gustavus Adolphus College, I had a varied experience. In a study of the symptomatology of the disease it was at once evident that it was not typical to the old-time la grippe. I was impressed by the extreme acidosis present in the severe cases, and, because of this condition and the resulting depression from it, I discontinued the use of aspirin. The acid condition was combated by a free administration of the alkalies, such as the sodium or potassium salts. By keeping the system in a non-acid condition in which the urine was kept normal in reaction or alkaline it was kept free of diacetic acid and acetone.

The alkaline treatment with quinine gave fairly good results, at least patients came through the attacks much better than those who had been under the influence of aspirin. With a mortality of about 2 per cent there were no cases of pus in the pleural cavity, which seems strange when empyema was so common a complication under ordinary treatment. A probable explanation is, that the acid bodies were not allowed to form, and the other treatment had for its purpose the maintenance of the strength of the patient.

With the happy results in the large percentage of the cases one was helpless in the presence of the critically severe cases in which pneumonia was so frequently a complication. Many of these patients were stricken and died as though overwhelmed by a general septic infection that within a few brief hours strikes down the strongest and most robust in health. Personally, I believe that the pneumonic plague that devastated China within the past few years and the influenza were one and the same.

A physician in an obscure North Dakota town reported in The Journal-Lancet his experience in the use of quinine dioxychloride in the treatment of influenza.* This report should have been given greater notice, but to this day I have seen no mention of it in any medical journal. Not remembering his name I wish to herewith acknowledge my indebtedness to him. He used the drug hypodermically in 7.5 grain dose several times daily. The action of the drug was spoken of as being little short of marvelous.

Becoming interested in the subject I found the use of quinine, hypodermically, discussed quite exhaustively in Forcheimer's "Therapeusis of Internal Diseases" (Vol. II, p. 234). Quoting from the above: "Cohen uses the more active salt, quinine and urea hydrochloride. . . . The initial dose is from 1 to 1.5 gram. (15 to 25 grains), followed by a second or third injection according to the effects and urgency of the symptoms. Following the use of the remedy there is no cinchonism. The temperature and pulse fall gradually and proportionately; the respiration falls more rapidly; there is a tendency to the restoration of the normal pulse-respiration ratio. . . . Patients are more comfortable after the injections, pulse is full and strong, cough materially relieved, delirium favorably influenced. Lysis between the fifth and eleventh days was found in the majority of cases. There was no crisis. The most striking improvement in the respiratory symptoms, cardiac vigor, holding and improvement in the blood-pressure led to the logical inference that the results are chemical and anti-toxic. The urine should be kept alkaline with sodium or ammonium compounds. "I would not like to treat a case of pneumonia without this important resource at hand. Pesoldt considers the use of quinine hypodermically as a specific. Henry subscribes enthusiastically to the quinine injection treatment of pneumonia."

With such authority as quoted I felt justified in the use of large doses of soluble quinine in the treatment of influenza with its complications. Fortunately, I had a limited supply of quinine and urea hydrochloride. Unfortunately, I began its use near the close of the epidemic, so cannot report as extensively as I wish I might do. However, my limited experience makes me a firm be-

*Peter Jelstrup, M.D., Petersburg, N. D., in The Journal-Lancet for January 15, 1919.

liever in the specific action of this drug in influenza and pneumonia, and I believe, had it been widely used, the death-rate from the two diseases could have been materially lessened.

Quinine and urea hydrochloride was used in the simple and most critical cases. The action of the drug was uniform and decisive in every case. Its action was as positive and similar to large doses of antitoxine in diphtheria. There was a uniform drop of from one to two degrees following each injection. In no case was there depression or other untoward symptoms following its use except quinine deafness, which disappeared within a few days.

It was my practice to give injections of 7.5 grains, repeated in six hours according to the urgency of the symptoms.

Considering the experiences of those whom I have quoted and my own limited use of quinine and urea hydrochloride, I believe we have here the most positive treatment of influenza and pneumonia yet introduced.

A FEW FUNNY FACTS FROM FIFTY YEARS FINDINGS

By W. L. Beebe, M.D.
ST. CLOUD, MINNESOTA

Mr. President, Ladies and Gentlemen, and Members of the Stearns-Benton Medical Society:

On the principle that "No man is wise who is not, betimes, a boy," we, the Stearns-Benton County medics, have this our annual picnic. We are out for a good time, caring little for the literary or medical part of the program, as is evidenced by the program committee's selection of essayists. "Good Time" is our slogan, and may you all have one on this occasion.

But to hold my place on the program, I have put on paper a record of a few cases under the title, "A Few Funny Facts from Fifty Years' Findings," observations of cases which I think you will admit are unique, and many of them ridiculous, if not criminal.

In Ohio, a year prior to graduation, when riding around with my father, who was a physician and from whom, as a preceptor, I learned more of the little medical knowledge I possess than I did in the two courses of four months each, which was all that either of my medical colleges, the Ohio University and Bellevue, required before giving a diploma, I had some peculiar experiences.

My father and I went in consultation with a doctor in a case of enlarged prostate. The local physician was introducing a silver catheter, and after pretty extensive hemorrhage, in order to dislodge what he supposed was a clot in the eye of the catheter, he applied his lips to the instrument, from which was oozing the blood and secretions of the kidney, and blew them out. The eighty-year old patient gave a gasp, and, seizing a golden harp, started to give a concert around the great White Throne. I said to my father "That was a deuce of a trick." "Well, it certainly was original," said he.

My second case, which impressed itself on my unsophisticated mind, was at Spring Hill, in this county. A member of this Society had been attending a case of placenta previa for several days, and when it became quite alarming with hemorrhage he had an urgent call to the country. I was called, and as I entered the yard the husband said, "I would rather lose a hundred dollars as lose dot voman. She was a good vorker." After podalic version, I left him with the woman and the offspring, both in good condition. But how he did kick a hole in the atmosphere when I charged him only one-half of the $100.00, and tried to convince him that he was $50.00 to the good, according to his own arithmetic.

Another remarkable case in obstetrics was at Fair Haven. The local physician, together with one from Clearwater, had put in two days and nights trying to extract a child by pulling on the arm. Just as I was entering the house, the doctor remarked, "I expect I better tell you ve cut the arm off dot baby." I said, "Oh, you did? That may have been pretty good surgery, but it certainly was very poor obstetrics. I would rather take the youngster out and do the amputation later, if necessary."

Another not dissimilar case, out in Benton County, twenty miles. A bright and shining light of your profession, who was practicing without a license, had pulled three days and nights on an arm, and had so engaged it that it was with great difficulty I was able to turn the youngster. I gave the husband fair notice that

*Read before the Stearns-Benton County Medical Society, October 16, 1916.

I had little hopes of the woman living. She died two hours after I left the house.

One more rather unique labor case. The doctor gave a hypodermic of pituitrin in a few minutes after reaching the patient, a primipara. Following the rapid delivery, he was sewing up the perineum, having asked the young twenty-one year-old father to make pressure over the uterus. The latter, with a movement of surprise, said, "There is another one in there, doctor." Following the delivery of this one, a second repair of the perineum was necessary, the stitches from the first sewing failing to hold.

If any of you has had such an experience, I trust that you will be honest enough to confess it, for it is by our errors and those we witness of others that we learn. A leading surgeon of St. Paul has established a national reputation for reporting his mistakes. The first one was the leaving of a pair of scissors in a woman's abdomen.

I think of another rather amusing instance. A leading gynecologist of St. Paul left a widely dilated bivalve speculum in a woman, and got to his office before he missed it. He returned and said to her, after an examination, "I guess that is sufficiently dilated now."

While on the subject of what I think erroneous practice, I will relate what an ex-nurse tells as her own experience. Being subject to asthma, a follower of the great so-called homeopathic surgeon, Pratt, of Chicago, proposed to her that if she would permit him to remove the hood from her clitoris, that is, to circumcise her,—he could improve her breathing. She, being of the opinion that that portion of her anatomy was sufficiently exposed and sufficiently sensitive, declined with thanks, saying that she feared the remedy would be worse than the disease.

My first case of obstetrics is indelibly impressed on my memory. After my first three-months course of lectures, father and I were sitting on the porch one hot summer afternoon when a young colored gentleman came galloping his horse up to the door and asked father to go five miles to deliver his wife of her first baby. Father said, "Young man, this will be the first case you will take care of." As I went into the door I could hear the little mulatto exclaiming: "Oh Lord God Almighty, come right down through dis roof and deliver me; Oh, Father Abraham, came and deliver me; Oh, Thou Son of David, come and deliver me." I said, "If you will stay in that bed I can beat Father Abraham or the Son of David in delivering you," which was mostly bluff, by the way, for I really was shaking in my shoes. But, remembering father's parting advice, "You need not try to differentiate as to which presentation it is, but just sit around and wait for the little nigger to crawl out, tie the cord, give the kid to some old mammy, and come home." I will admit that I was feeling a little more chesty when I got into my saddle on the return trip than in going there.

The Benton County follower of Esculapius who gave me the case mentioned above said the patient died as a result of his three days' pulling, together with my efforts at turning, and he taught me quite an original method of treating a fractured leg. A prominent merchant of Foley sent for me one night late to come out and see him. I went in a pair of bobs, a very cold night, with a bed of hay, a big buffalo skin under me and another over me. I found the patient with fractured tibia and fibula, and suffering great pain from the application of narrow (one-half inch) boards bound tightly around the leg, bare boards on bare leg; and the swelling consequent on the tight binding was causing great pain.

Among interesting cases I want to report one on insurance examination—a man who, though fifty years of age and with no insurance, went to an insurance agent and said, "I want $50,000 worth of insurance." One of his company's examiners was out of the city, and another could not be found, so the agent took his third alternate and they selected another medical friend; and, contrary to most insurance companies' rules, both examined the applicant and passed him. It was a simultaneous examination. When the Company, as is usual, wrote one of the other examiners asking whether he could have been reached the day of the examination, and whether he knew of any good reason why the applicant was not a good risk, the doctor replied that he was in St. Cloud all that day, and he did not know of any reason for rejection, except that the application had been made, before the examination, for this party's admission to a sanitarium for paresis, and of specific origin of course. The next day he was strapped to a bed in the sanitarium as the most violently insane man the superintendent had seen for months. He had gone around the day of the examination trying to buy out two local banks. The loss of the $1,604 premium made the agent suddenly ill, a complete nervous prostration.

REPORT OF TWO CASES OF CONGENITAL OBSTRUCTION OF BOWELS

By Olaf Th. Sherping, M.D.,
FERGUS FALLS, MINNESOTA

CASE 1

A pair of twins of a primipara were at birth apparently healthy and normal. On the fifth day one of them commenced to vomit occasionally. The vomiting increased in frequency so that at the end of the second week very little of the milk was retained. The infant lost in weight, and at the end of the fourth week he weighed only three and one-half pounds.

A diagnosis of congenital obstruction of the pylorus was made, and the case was referred by Dr. Naegeli for operation.

The Ramstedt operation, according to Dr. Bevan's technic, was decided on. About one ounce of a half of one per cent solution of apothesine, with ten drops of adrenalin solution to the ounce, was injected along the external border of the right rectus muscle. On opening the peritoneum the round ligament, which was very large, was retracted to the right. The pyloric end of the stomach was brought up into the wound, and the pylorus was grasped between the thumb and the index-finger of left hand. Around the pylorus was a hard, fibrous ring about three-fourths of an inch in width and about three-eighths of an inch thick through the center, tapering off to the upper and lower edges. A small branch of the pyloric artery extended along the upper portion of the fibrous ring within one-fourth of an inch of the upper border of the pylorus.

An incision was made through the fibrous ring in the bloodless area down to the submucosa. A small artery forceps was then passed between the cut edges of the ring, and by opening the blades of the forceps the ends of the ring were pushed apart. This procedure was repeated until the central portion of the cut ends were separated about three-fourths of an inch. The duodenal mucosa and submucosa was quite thin, and bulged freely. Owing to this condition Dr. Bevan emphasizes that care be taken during this part of the operation so as not to penetrate the bowel. The pylorus was then dropped back into its normal position, and the wound in the abdominal wall closed. The peritoneum was sutured with No. 0 pyoktanin formalized catgut. Three silk-worm sutures were introduced, and the muscle and fascia closed with a continuous suture of No. 2 formalized catgut. The skin was closed with No. 0 formalized catgut, and the silkworm-gut sutures tied. Dressings were applied, and two strips of adhesive plaster were applied to support the wound during the healing.

Emphasis is placed on the care in suturing and support of the wound on account of the slow healing in infants in an emaciated condition from starvation.

The infant was given nourishment shortly after the completion of the operation, and vomited only a couple of times a small amount of the nourishment taken. After that an uneventful recovery followed. The local anesthetic worked well. The child whimpered and fussed a little during the anesthetizing and operation, but not any more than he did before anything was done to him. He never cried or showed any symptoms of pain. The Ramstedt operation under local anesthesia is one of the real life-saving procedures, easy to perform and without the slightest shock or danger to the life of these little patients.

CASE 2

A boy, seven years old, very much emaciated, weighing about thirty pounds, presented the following history:

Family history shows that the parents were farmers, and had always been in perfect health. The mother had given birth to three children, who were living and in good health. The patient when born was a very large child, weighing about ten pounds. He was nursed by the mother, but, after the first month, vomited a great deal after each feeding. At nine months of age an attempt was made to feed him milk and bread or mush, but most of this food would be vomited up a couple of hours after feeding. The bowels would not move except by the use of an enema. After being weaned the child fed on milk and thin broths, of which he could retain only a small portion. He developed very slowly. Various forms of medical and mechanical treatments had been tried without any improvement.

On examination the stomach was found to be very much dilated and extended below the navel. The abdominal wall was so thin that the contour of the stomach could be distinctly seen. A small stomach-tube was passed, and about one-half gallon of curdled milk and turbid liquid was drawn off. After the stomach was thus emptied a hard,

elongated mass could be felt between the ensiform cartilage and the umbilicus. No accurate diagnosis could be made except that there existed some constriction of the upper portion of the small intestines.

An operation was decided on. Before administering the ether the stomach was emptied, and washed out with a saline solution. Only a small amount of ether was needed for complete anesthesia. An incision was made in the median line from the ensiform cartilage to the umbilicus. Just a thin, filmy membrane represented the omentum. The transverse colon was empty and was about three-fourths of an inch in width. The stomach was large and flaccid with very tortuous and distended veins. By displacing these viscera upwards the small intestines were found to be empty and terminated near the transverse mesocolon in a twisted pedicle. The upper end of the jejunum formed a cuff or band around the twisted mesentery. Fastened to the anterior surface of one of the vertebræ near the attachment of the mesentery was an osseous quill four inches long. It was about one-half inch in diameter at the base, and passed downward just anterior to the spinal column in the center of the mesentery, gradually tapering like a goose-quill and ending in a cartilaginous point about two inches long.

Owing to the precarious condition of the little patient the examination was made hurriedly, and for this reason exactness of observation was sacrificed and many interesting features were overlooked. The intestines were brought out of the incision en masse and turned from the patient's left to right one and one and a half times while that part of the jejunum forming the ring or band was dissected free from the mesentery. It was so contracted that only a small lead-pencil could have been passed through its lumen. The intestines were returned to the abdominal cavity, and a pint of normal salt solution was poured in. The wound was closed with formalized catgut and silk-worm gut sutures.

The patient made an uneventful recovery, having no vomiting after the first day and retaining the nourishment without discomfort. He gained rapidly in weight and, on leaving the hospital three weeks after the operation, weighed forty-five pounds. A report three years later shows that he had been in perfect health—able to eat and digest any kind of food, and had regular and normal bowel action.

THE RED CROSS CHRISTMAS SEALS

The National Tuberculosis Association and its one thousand affiliated societies are planning on a considerable enlargement of their activities during the coming year, to judge from the fact that 650,000,000 of the familiar Red Cross Christmas Seals are to be put on sale this December. As is well known, the proceeds of the annual seal sale are used to finance the educational campaign of these associations against tuberculosis and other preventable diseases.

Undoubtedly, the exclusion of 120,000 tubercular men from military service during the war has had much to do with the present revival of interest in public health. The preponderance of these rejections from the rural districts,—the discovery that the country was not as healthy a place in which to live as the city,—has definitely tended to arouse every rural community to a sense of group responsibility for the health of its citizens.

Along with this awakening comes the announcement that a larger proportion of the funds realized from the seal sale are to be available in 1920 for purely local health work,—from 50 to 80 per cent, according to the amount raised in the community. The remainder of the fund will be shared equally by the National and state associations. Predictions are hazardous, as a rule, but it is safe to forecast that the great majority of communities will capitalize this opportuntiy to their utmost.

The actual achievements in disease prevention made by these agencies and the high character of the physicians associated with them, together with the steadily increasing popularity of the Red Cross Christmas Seals, point forward to still greater accomplishment and justify the fullest measure of public support.

Physicians have repeatedly endorsed the Red Cross Christmas Seal sale as an effective and

People are coming to realize that public health attractive means of popularizing health.
is purchaseable and to look upon the money given for its maintenance as a paying investment in common welfare as well as an expression of good-will and fellowship.

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ANOTHER "DIVINE" HEALER

With all the other strange and incongruous things that are going on in the world at the present time, we are not surprised that from out the Episcopal Church comes a "divine" healer. And judging from the picture, in a Chicago paper, of this man who is attracting newspaper notoriety, we would say that he is a very good-looking chap, and that, undoubtedly, his clinic is largely composed of women.

Of course this eminent "divine" claims that he has no special gift of healing. He simply ministers to the afflicted by the laying on of hands and the use of a few well-chosen prophylactic and therapeutic words. With all of his popularity (his present popularity, a kind that usually comes on suddenly, like an exploding bomb, and goes down to earth like a "dud"), he has been much criticized by some of his fellow ministers. They even go so far as to say that he is neither reasonable nor religious, and that he is simply following in the bitter memories of the Irvingites, the Dowieites, the Christian Scientists, and all of this type of healers. One recalls, too, the sudden rise and fall of the Emmanuel movement, which rose suddenly and almost as abruptly fell, in Boston a few years ago. This movement and the present one are a sort of hypnosuggestive commingling of words together with a very clever bit of newspaper notoriety, which is really all one needs to start something that is irregular, both in and out of medicine. Of course, it may be very interesting to the student of psychology, but it is particularly interesting to the psychopathologists because they recognize the substitution, the blind following of a new and untried leader, and the certainty that the movement is one of sky-rocket propensities, and really has as much good in it as the sky-rocket itself. This man is trying to materialize the Christian religion.

From what has been said his effort is apparently one against the faith of the New Testament, and certainly it is quite contrary to the works of medicine, science, and the good influences that are brought to bear by the physician who is doing his duty, not only from a reasonable, but from a scientific, basis. Of course, other men have indulged in this paying pastime, and it, undoubtedly, has flourished in other countries, particularly in England, where they ascribe magnetic powers to some of their healers, who sway "certain minds" so that beneficial results may be obtained. These "certain minds" usually belong to feeble intellects, or are possessed by individuals suffering from all sorts of diseases of the imagination and who will accept anything, including definite forms of torture, to get away from themselves.

Evidently, this new "divine healer" is having a busy time of it, because he has employed two assistants, both of whom are ministers and both of whom are ministering to the afflicted in the same manner as their chief. This seems to be the psychological moment for all sorts of new methods to be brought into vogue. With the world in its state of unreasonableness and unrest it is an easy matter to find dupes who will accept any new doctrine or any new method offered them, whether it be the work of the mind or of the body. The people of this enlightened globe are ready to be humbugged, and to be told a lot of rubbish by men of untried principles—in fact, it seems rather humiliating to admit that people would rather suffer under quackery and charlatanism than accept something that is reasonable and has a sound basis for its existence. There is always the danger that the man who is really sick may need scientific attention, and if he drops his methods of living, which have been ordered by someone who is supposed to understand his mental and physical condition, and accepts the tenets of the untrained and unskilled, it may do him great harm. Such people are to be commiserated, for they not only need instruction and enlightenment in common sense principles, but

they need proper and skilled care. We have no sympathy, however, for the failure of the advocate of a new idea who plumps himself into prominence by, perhaps, unconscious trickery, or probably he has a little "kink" in his mind which makes him think he is foreordained to bring illumination into the darkness of disease. These men fall, of course, because of their over-zealous methods, and most of them show, within a reasonable time, a mental twist that might have been ascertained earlier if they had been put through the ordinary psychological tests. They have the gift of words, they have the manner and the form, which they make rather impressive, but when they fall from the throne of healing grace they disappear entirely. The writer well remembers a clergyman who got a little beyond his limitations. He went from one thing to another, and the last thing that was heard of him was that he had become traveling salesman for a cigar firm.

We have not for a long time been granted this opportunity to accept the gracious healing of the Almighty through ministerial hands and mouth, but, now that it has come for a brief period, let us accept it as one of our minor burdens, knowing full well that a little time will lift the load and bring us out of this slough of psychiatric despondency. There must be money in this sort of thing or these men would not cling to it so tenaciously. Of course, we all know there is more to be gained, from a financial point of view, from the transient, volatile method than from the slow and laborious efforts along the line time and experience have proven the only right way.

This same bubble-like explosion comes to the medical man not infrequently. He relies upon a line of treatment which he thinks is unsurpassed, and he waves it in the air and talks about it until he believes in it himself. Then some uncouth, perhaps, but skillful practitioner pricks the bubble, and it disappears like the soap bubble of the child.

WAR RISK INSURANCE PATIENTS

The Government is evidently striving to do everything in its power for the soldier who returns from service, either abroad or at home, who is sick or injured, or who becomes ill after his return to his home. Those of us who have had an opportunity to follow these men have learned a great deal about the order, and sometimes the disorder, of such a tremendous enterprise; but it is just to say that, first of all, the effort is directed for the sick or injured man, and that he is given precedence, and is given the opportunity to receive from a hospital, or from a staff of examiners, all that is necessary to insure his comfort and his cure.

It is rather suggestive, in a way, that a good many of these soldiers who return to their homes go back apparently well only to develop, in a few weeks or a few months, a disorder or a disability. These men are received with the same courtesy and care as the men who get off the ship and go direct to the reconstruction hospitals.

The hospitals in the Twin Cities that have been designated by the War Risk Insurance Department for this work are already filled to their capacity, considering that other patients, not soldiers, are to be taken care of, too. Among these soldiers there are cases of all kinds,—medical, neurological, and surgical,—and each man is looked over by the admitting officers and assigned to the man under whose care he should be. Then, too, after an examination, if he is found to have other troubles, he is again referred to someone else, until the diagnosis is absolutely clear. This may involve his seeing three or four men, either alone or in consultation with the others attending. For instance, if he has a gastro-intestinal trouble and the findings are not satisfactory or significant, he is turned over to the neurologist for an opinion; and, if the findings of the latter are negative, he is returned to the department of medicine. So in the case of wounded soldiers, particularly those who are wounded about the head and back, or even in some of the great nerves of the extremities. They are given the opportunity to be studied and are carefully treated. So far as one can observe, the soldiers are very appreciative of the care bestowed upon them by both the hospital and the attending specialists.

One case that comes to the writer's mind is that of a man who had a skull wound and fracture. He was immediately operated on by someone in France, who did a decompression. The man improved until recently, when he showed very clearly that something had gone wrong with the original wound. He became partially hemiplegic, and had attacks that were epileptiform in character. He was again carefully studied by two or three men, and it was decided that his wound should be reopened, as the *x*-ray plate showed a spicule of bone penetrating the brain. This operation was done with great skill, and, much to the joy of the operator, two large

bony spikes were found imbedded in the brain. They were removed, and the man has every prospect now of further improvement and perhaps of complete recovery. Ordinarily, such patients are not given the attention they require. It seems a doubtful matter to operate, and yet the patient should be given the benefit of any doubt.

Of course, there are a large number of cases of nervous weakness or nervousness, which are sometimes classified as neurasthenias or psychasthenias, or similar disorders, but nervousness really covers the situation. Some of the men who belong to races that are fundamentally neurotic have really a group of complex but classical symptoms. They complain mostly of queer sensations of the lower chest and upper abdomen, their food distresses them, and they have gas and great discomfort. One might naturally think that these people were purely and wholly nervous, and some of them are. On the other hand, the necessity of calling in the surgeon and medical man has shown that some of these patients have abdominal disorders, such as appendicitis, gallbladder disease, or tosis of the various viscera.

Certainly, no one could get better results than a small staff who co-operate and co-ordinate their work for the benefit of the patient, and this, too, without remuneration other than something extremely nominal for any busy doctor. We wonder, in considering this question, whether it is quite fair in the Government to ask so much of a busy surgeon or practitioner without reasonably good compensation. We understand that in Georgia there is a hospital equipped and controlled by a staff who receive pay for everything they do, both in medicine and surgery, and the fees are adequate and similar to the fees in private practice. The presumption is, that most of the medical men, both at home and in service, helped the Government out in many ways, not only by their time and advice, but with their money, and it is no more than fair that the Government should recognize this, and be ready to compensate the operator or the technician for the work that he must do for an indefinite time.

THE DANGERS OF STATISTICS

We think we may safely make the broad statement that at no other point is the progress of medicine and medical education so hampered as in the matter of statistics. The art of today will become the science of tomorrow if the statistics of the art are wholly reliable and uphold the inevitable conclusions such statistics point to.

Only a few weeks ago full-page advertisements of a "sure cure" for constipation, and other things, appeared in the *Journal of the American Medical Association* and the state journals. The sole basis of the claim seemed to be a report of experiments made in *ten* (10) cases at two or three hospitals with the assistance of distinguished physicians, the investigator himself not being a physician. (We put the number of cases in italics with figures in parentheses, in true legal style, in order that no reader may overlook the "statistics" upon which depends the transformation of the art of curing constipation by *Fleishman's* yeast into the science of curing constipation.)

To expound our thesis further, we turn from the advertising pages of these medical journals to an "editor's proof sheet of the only scientific periodical in America devoted to the subject of tuberculosis." A proof sheet, let us say in passing, is a sheet of ready-made clippings, generally in the form of quotations from a forthcoming publication. Such a sheet is prepared by the editor of one publication, and sent to other editors for their use. The proof sheet from which we quote is from the *American Review of Tuberculosis,* and is made up of quotations from articles in the October issue of that admirable paper:

CONDITION OF PATIENTS TWENTY YEARS AFTER DISCHARGE FROM TRUDEAU SANATORIUM

The Trudeau Sanatorium has succeeded in tracing 814 patients who have been discharged from the institution twenty years or more. Of these 666 or 81.8 per cent are dead while 148 or 18.2 per cent are alive. Heise further notes that of those discharged with the disease active 4 per cent are now known to be alive, and 35 per cent are alive of those who were classed as "inactive" on discharge.

Heise, Fred H: The Condition of Patients Twenty Years after Discharge from the Trudeau Sanatorium. *American Review of Tuberculosis,* Vol. III., No. 8.

The facts stated in these statistics are, indeed, interesting, and a tuberculous person might draw helpful, cheerful, or depressing inferences from them, but would the apparent conclusions be scientific conclusions? It is to be noted that not one word is said in the extract about the life expectancy of these persons as based upon their ages, and all might have died within the twenty years wholly regardless of their tuberculous condition, whether the disease were active or inactive.

Unless a reader is able to put an approximate value upon the statistics he finds in medical articles and books he will read "such literature" in vain, if not to his hurt.

WATER SUPPLIES AND SEWAGE SYSTEMS FOR FARM RESIDENCES

The Division of Sanitation of the Minnesota State Board of Health has issued a 45-page illustrated pamphlet on "Water Supplies and Sewage Systems for Farm Residences," which will be sent free to any resident of Minnesota, and, we presume, to any physician outside of the state.

The thirty-three pages of illustrations speak a universal language, which any man, whether physician or farmer, American or foreigner, can read; and we venture to say no more reliable or valued information on the subject can be had.

The frontispiece, tagged "Picturesque, but not sanitary," shows a handsome maiden at the well about to drink out of "the old oaken bucket." While it is calculated to prolong life with its suggestion of prohibition, it takes some of the joy out of life, unless the "old oaken" is made "sanitary." The way is suggested in other illustrations of the pamphlet.

Every physician practicing in the country should have this pamphlet, which was prepared under the direction of Mr. H. A. Whittaker, Director of the Division of Sanitation of the State Board of Health. Mr. Whittaker is a recognized authority on this subject.

WHY REGISTER THE BIRTH OF A BABY?

The United States Public Health Service gives twelve reasons why a baby's birth should be registered, and the physician who fails to register such a birth in his own practice, regardless of the law of his state, is responsible for the consequences that may follow his failure, as indicated in the reasons for registration.

Would any mortal man intentionally be responsible for any one of the consequences set forth? If not, why be unintentionally responsible?

The twelve reasons are as follows:

1. To establish identity.
2. To prove nationality.
3. To prove legitimacy.
4. To show when the child has the right to enter school.
5. To show when the child has the right to seek employment under the child labor law.
6. To establish the right of inheritance to property.
7. To establish liability to military duty, as well as exemption therefrom.
8. To establish the right to vote.
9. To qualify to hold title to, and to buy or sell, real estate.
10. To establish the right to hold public office.
11. To prove the age at which the marriage contract may be entered into.
12. To make possible statistical studies of health conditions.

"ALL ABOUT MILK"

Every sane effort made to improve the public health deserves the recognition and encouragement of the medical profession and of medical journals. In this spirit we mention and commend, a semibusiness enterprise which, in our opinion, means much for better health.

The Metropolitan Life Insurance Company, of New York, has issued a 32-page pamphlet, entitled "All About Milk," and edited by Dr. M. J. Rosenau, professor of Preventive Medicine and Hygiene in Harvard University. The purpose of this pamphlet is to prolong the lives of persons insured in this Company; and out of such prolongation of life comes profit to the Company, sufficient to pay the cost of this educational scheme.

We gladly commend such effort, and recommend the reading of this pamphlet by physicians interested in public health. The pamphlet is really intended for the family, not for the physicians; but the best way to get such information into the family is through the family physician.

The health value of milk is not thoroughly understood by our people, while, on the other hand, many do not know its limitations in a balanced diet, and so use it to excess.

MISCELLANY

LAENNEC AND A CHILD'S TOY

Just one hundred years ago Rene Theophile Hyacinthe Laennec, one of the pioneers of modern medicine, observing some children playing in the gardens of the Louvre, listening to the transmission of sounds along pieces of wood, conceived the idea of utilizing this method for listening to breath-sounds in examining a patient's lungs. He went home, fashioned a tube by rolling up some glued paper, and then experimented with this in his ward at the Neckar Hospital. From this incident in the garden dates the modern "stethoscope," an instrument well-nigh indespensable in the modern practice of medicine.

The early stethoscopes contrived by Laennec were unlike those generally in use in this country at the present time, for they were constructed to be used by one ear only. Nevertheless the original Laennec type is still widely used in European countries. To us, who are accustomed to the scrupulous cleanliness of everything about the modern hospital, it is curious, indeed, to learn that the filthy condition of the patients in the hospitals in Laennec's time made it repugnant to physi-

cians to listen to the sounds in the lungs by placing the ear directly on the chest of the patient.

Laennec gave his invention the name by which the device is still known, deriving the word *stethoscope* from two Greek roots, one meaning the "chest" and the other "to observe" or "regard."

In using the stethoscope the instrument should be placed on the bare chest-wall. For this reason a satisfactory examination of the lungs can be made only when the patient is stripped to the waist. Careless physicians sometimes attempt to examine a patient's chest through the clothing. Such an examination is worthless. If one wants reliable information concerning the condition of his lungs, he should not go to a doctor who attempts such careless work. It is time and money wasted.

Dr. Laennec was born at Quimper in Brittany on February 17, 1781, growing to manhood during some of the most troublous years in the history of France. He studied medicine at Paris, receiving his degree of doctor in 1804. He died on August 13, 1826, at the early age of 45, in the quaint old town in Brittany in which he first saw the light.

"HOLD THE LINE, PLEASE"

Your telephone rings. You pick it up and some switchboard voice says, "Hold the line, please, for Mr. Smith." You are probably just as busy as Mr. Smith, but to save himself time, he has instructed his operator to "get you on the phone," and there you are while Mr. Smith completes his conversation with somebody else, or signs a few more letters, or on some other account comes leisurely to the point where he picks up his own phone and greets you as pleasantly as if he did not know that you were out of humor and annoyed by having to await his convenience.

This thing of getting the other fellow on the phone and compelling him to wait while the connections are completed or until somebody who wishes to speak with him has found it convenient to begin the conversation, is a piece of bad manners which ought to be corrected. No man has a right to assume that his time is any more valuable than that of the individual with whom he wishes to speak, and if he does he is taking chances, many a time, on creating an atmosphere on the other end of the line in business hours that will either cost him an order or spoil a deal.

It is a courtesy to the man you want at the other end of the line to be on the phone yourself when you call him, and, if he has a switchboard, there is no propriety in putting your call beyond his switchboard and then waiting for that board to make connections with his desk.

Some of us are going to fix a limit pretty soon on the time we will hold the line for Mr. Smith and it is going to be about a quarter of a minute.—*Minneapolis Tribune.*

BOOK NOTICES

THE MEDICAL CLINICS OF NORTH AMERICA. Volume III, Number 1. (The Chicago Number, July, 1919.) Octavo of 277 pages, 59 illustrations. Philadelphia and London: W. B. Saunders Company, 1919. Published bimonthly. Price, per year: paper, $10; cloth, $14.

1. Dr. Isaac Abt reports a case of biliary cirrhosis in a two-year-old child, differentiating it from other hepatic conditions, and discusses prognosis in all diseases of infancy.

2. The various bone diseases of infancy and childhood are differentiated by Dr. Julius Hess by means of *x*-ray plates with detailed descriptions, and with clinical histories of each.

3. Dr. Clifford Grulee emphasizes the importance of microscopic examination of the urine in all fevers of childhood, and describes some cases of obscure fever due to pyelocystitis.

4. A case of cerebrospinal lues, with negative blood and spinal-fluid Wassermann and one of ethmoiditis with neurologic findings are reported by Dr. Ralph C. Hamill. He also discusses the causes of functional nervous diseases which he considers to be based upon the conflict between instinct and education in the individual.

5. Dr. Peter Bassoe reports twenty-six cases of paretic dementia treated by the Swift-Ellis method. He presents a number of case-histories with full tables of blood and spinal-fluid findings in each.

6. A plea for early use of the ophthalmoscope and other means of eye-examination in medical diagnosis is made by Dr. R. J. Tivnen.

7. Dr. Robert Sonnenschein presents a group of ear cases, including acute mastoiditis, otosclerosis, and tumor of the cerebellopontine angle.

8. Walter W. Hamburger shows a series of *x*-ray plates of abnormally placed colons in patients complaining of indefinite gastro-intestinal symptoms.

9. The cause of constipation is outlined by Dr. W. D. Sansum, who also gives a full discussion of treatment by means of diet. Several tables are added.

10. Dr. Geo. F. Dick reports a case of clinical typhoid fever with persistently negative Widal, which yielded a strain of gram-negative organisms in cultures from stool and urine agglutinating in the patient's serum.

11. A case of diabetes with weight loss following increase of glycosuria is discussed by Dr. Frank Wright.

12. Dr. Frederick Tice describes a case of lymphosarcoma of the mediastinum extending into pericardium, auricle and jugular veins and a case of carcinoma of the pyloric end of the stomach.

13. A case of gastric carcinoma in which the only symptoms were those due to the bone metastases is reported by Dr. Milton Portis who also discusses the treatment of carcinoma of the esophagus with radium.

14. Dr. Arthur F. Byfield describes Hodgkin's disease as an infectious or malignant granuloma and reports a case with complete and repeated blood studies and with photomicrographs of the glands involved.

15. Some common cardiac arrhythmias with indications for treatment are discussed by Dr. James G. Carr, who also shows *x*-ray plates of periostitis and of pulmonary abscess developing after tonsillectomy.

16. Dr. Solomon Strouse discusses the treatment of diabetes, hyperthyroidism, and gastro-intestinal disorders when these conditions are accompanied by pulmonary tuberculosis, and also reports a case of belladonna poisoning.

17. A case of malignant endocarditis of the pulmonary valves is shown by Dr. Charles Spencer Williamson, whose skillful diagnosis of this unusual lesion is confirmed at autopsy. He also demonstrates a case of gout previously diagnosed as arthritis, and discusses the diagnosis and treatment of this condition which he considers not rare.

OLGA S. HANSEN.

NEWS ITEMS

Dr. H. H. Hanson has moved from Hallock to Kennedy.

Dr. Olaf Bentzen, of Grand Forks, N. D., has moved to San Diego, Calif.

Douglas County, Minn., has organized a County Health Association.

Dr. Blake Lancaster has moved from Sherwood, N. D., to Wahpeton, N. D.

Dr. C. L. Olson, who formerly practiced at Pine Island, Minn., is now located at McIntosh, S. D.

The Southwestern Minnesota Medical Association held its annual meeting at Luverne last month.

Dr. W. J. Kucera, formerly of New Prague, has returned from army service in France, and located at Hopkins.

Dr. J. Warren Little, of Minneapolis, read a paper at the November meeting of the St. Louis County Medical Society.

Dr. A. E. DeTuncq, just home from army service, has become the partner of Dr. Charles Flett, of Milbank, S. D.

Dr. C. H. Swett, of Winner, S. D., is home from Chicago where he has been doing postgraduate work in surgery.

Dr. M. O. Oppegaard has moved from New London to Minneapolis, and has offices in the Physicians and Surgeons Building.

Dr. E. M. Darrow, of Fargo, N. D., has been seriously sick for some weeks, and underwent a critical operation a couple of weeks ago.

Dr. M. W. Roan, of Bismarck, N. D., was shot by a companion while rabbit hunting last month, but was not dangerously wounded.

Dr. E. S. Mariette, superintendent of the Glen Lake Sanatorium, near Minneapolis, has returned home after a leave of absence for four months.

Dr. H. M. Collison, who recently went to Dalhart, Texas, to do surgical work exclusively, has been spending a month at Rugby, N. D., settling up his affairs.

Dr. W. C. Wilson, of Grand Forks, N. D., has returned from army service, and resumed his practice as a member of the firm of Drs. Witherstine & Wilson.

Dr. F. J. Scully, of Bottineau, N. D., was married in Chicago last week, and he and his bride were received on his return to Bottineau in true western style.

Dr. G. A. Larson, a graduate of the University of Minnesota, recently returned from France, has become associated with Drs. F. M. and J. F. Smerth, of Owatonna.

Drs. R. J. Jackson, of Rapid City, E. W. Swafford, of Sturgis, and J. M. Brewer, of Hot Springs, are now members of the South Dakota State Medical Association.

Dr. Henry L. Ulrich has moved his office and laboratory from the Syndicate Building, Minneapolis, to the Eitel Hospital, and will have no office outside the hospital.

Dr. G. J. McIntosh, of Devils Lake, N. D., has been appointed superintendent of Ramsey (N. D.) County Board of Health, succeeding Dr. W. H. Cuthbert, resigned.

Dr. John Smith, of New York City, who was recently mustered out of the army at Ft. Snelling, has located in Minneapolis, with offices at Hennepin Ave. and Thirty-first St.

Dr. O. S. Watkins, of Carlton, who announced some time ago that he would retire, has gone to Billings, Mont., where he will reside. Dr. Watkins practiced in Carlton for thirty-five years.

Dr. E. P. Hawkins and family, of Montrose, will spend the winter in Florida. Dr. Warner, of Illinois, will have charge of Dr. Hawkins' hospital and practice while the latter is absent.

The Baby Clinic conducted along nutritional lines in Minneapolis several weeks ago, has attracted wide attention, and the U. S. Department of Agriculture will make known details of the work.

Many doctors were in Minneapolis during the first meeting of the American Legion, the new organization of the World War veterans, and all "enjoyed" a wholly unprecedentedly cold week.

Dr. Herbert A. Morris, of Minneapolis, who spent two years in the army in connection with the Department of Social Diseases, thinks the army work in this line was phenominally successful.

Dr. H. D. Valin, a pioneer in *x*-ray laboratory work, who formerly practiced in Mankato, has been appointed director of the *X*-Ray Laboratory of the University of Illinois, College of Medicine, in Chicago.

Dr. S. S. Jones, who has practiced at Frazee for nearly a quarter of a century, has sold his

practice to Dr. G. E. Runnerstrom, of Tacoma, Wash., who has been on the N. P. Hospital staff for the past three years.

Dr. Charles H. Mayo, of Rochester, who was already a professor on the surgical staff of the Mayo Foundation, now holds a like position on the staff of the Medical School, and will give lectures in Minneapolis this winter.

A memorial fund for the physical and intellectual improvement of the boys and young men in St. Paul's Episcopal Church of Winona, has been named the Dr. Hugh Farber McGaughey Memorial Fund in honor of the late Dr. McGaughey.

The Osteopaths of Minnesota have been endeavoring to obtain permission from Washington to prescribe narcotics under the sanction of the Harrison act, but have utterly failed, the Internal Revenue Office ruling emphatically against the permission.

Dr. William R. Murray, of Minneapolis, was appointed last month Professor and Chief of the Department of Ophthalmology and Otolaryngology in the Medical School of the University of Minnesota to fill the vacancy created by the death of Dr. Frank C. Todd.

Dr. L. G. Rowntree, of the University Medical School, has been detailed to spend six months in Rochester this year to lecture to the students of the Mayo Foundation. The appointment is not permanent, and will not deprive the Medical School of his services to any large extent.

The deaths from tuberculosis in Minnesota in 1918 numbered 2,543. Of this number 2,129 were from tuberculosis of the lungs, and 414 from other forms of tuberculosis. The deaths of this character in the Twin Cities and Duluth numbered 1,015. These figures are official.

The need of an accurate directory of physicians probably was never felt so much as today. The changes caused by the late war have made all such lists of little value. The American Medical Association will not issue a new edition of its admirable directory until January 1, 1921.

Our list of South Dakota majors, though made for us by the man best informed in such matters, was incomplete. The name of Dr. G. H. Lowthian, of Fulton, S. D., belongs to the list, and there are still others. Who knows? It is a list of real honor, and should be absolutely accurate, yet it is difficult to make it so.

What will poor John do now? John Till, the plasterman, has been applying plasters on the backs of the lame, the halt, and the blind for some years at Turtle Lake, Wis., avoiding the minions of the law by being associated with Dr. M. J. Bodermund; but a plaster would not save Bodermund, and he died last month at the age of 67.

The Interurban Academy of Medicine, of Duluth and Superior, held its annual meeting last month. Dr. Rood Taylor, of Minneapolis, read a paper on "Chronic Intestinal Indigestion." Officers were elected as follows: President, Dr. R. C. Smith, Superior; vice-president, Dr. A. C. Scherer, Duluth; secretary-treasurer, Dr. H. J. Orchard, Superior.

The statement made in our last issue that Dr. J. Frank Corbett, of the Medical School of the University of Minnesota, had resigned to enter private practice was a half truth, and, like all half truths, was unfortunate. Dr. Corbett remains in the Medical School for half-time work in experimental surgery, devoting the remainder of his time to private practice.

Dr. W. R. P. Emerson, Professor of Children's Diseases at Tuft's College Medical School, in Boston, was the guest of the Department of Pediatrics of the University Medical School of Minnesota and the Northwestern Pediatric Society last week. He gave an address on "The Malnutrition Child," to which all medical men of the Twin Cities were invited.

As this issue goes to press there is a rumor in Minneapolis that Mr. G. W. Olson, superintendent of the Swedish Hospital, of Minneapolis, will be appointed superintendent of the Minneapolis City Hospital to fill the vacancy made by the resignation of Dr. Harry A. Britton. Except for the loss to the Swedish Hospital that the appointment would occasion, the medical profession of the city would endorse the appointment both unanimously and heartily.

The Fillmore-Houston County Medical Society held its annual meeting last month at Preston. A new schedule of prices was adopted, as follows: Day visits in town, $2.00; night visits, $4.00; mileage for country visits, $1.00 a mile; telephone consultation, $1.00. The following were elected officers for 1920: President, Dr. G. M. Helland, Spring Grove; vice-president, Dr. C. B. Elroy, Spring Valley; secretary, Dr. O. F. Fisher, Houston; treasurer, Dr. L. K. Onsgard, Houston.

The Hennepin and Ramsey County Medical Societies held their first joint meeting at the Town and Country Club on November 17, when

Dr. Charles Lyman Greene, of St. Paul, presented a paper on "The So-Called Soldier's Heart in Civilian Life," and Dr. C. W. Waldron, of Minneapolis, presented a paper on "Face and Jaw Surgery." Each subject was illustrated with lantern slides. The meeting was a great success, and the smoker that followed was much enjoyed, especially by the chronic smokers.

The annual meeting of the Minnesota State Sanitary Conference will be held in St. Paul on December 9th. All county and municipal health officers should attend this meeting, and their expenses incurred in attendance should be paid by their respective cities or counties. Great problems will be discussed and probably settled at this conference, such as making the county, instead of the township, the sanitary unit of the state; the control of venereal diseases; the expense of caring for communicable diseases; regulations demanded in the control of influenza and pneumonia, etc. The power of the State is behind its health officers, and they should learn to act intelligently and wisely.

X-RAY TECHNICIAN WANTED

A group of physicians in an Iowa city want an expert *x*-ray technician of sufficient experience to do high-grade work; a woman is preferred. Salary will be right. Address 300, care of this office.

OFFICE POSITION WANTED

A graduate nurse with two years' hospital work in France wants a position in a doctor's or dentist's office in Minneapolis at moderate salary. Address 301, care of this office.

POSITION IN AN INSTITUTION WANTED BY A PHYSICIAN

A physician who is a graduate of Jefferson and has had years of experience desires work in an institution as head physician or assistant. Will accept work in insane or tuberculosis hospital. Will work for a moderate salary. He is a man of excellent address and exceedingly pleasant manners. Address 284, care of this office.

LOCUM TENENS WANTED

I want a physician to take care of my unopposed town and country practice for one month, beginning on or before December 10th. Town of 400 located in the central part of North Dakota. You can have what you make or a salary or percentage. State which is wanted. I am leaving for a rest. Address 301, care of this office.

SECOND-HAND *X*-RAY EQUIPMENT FOR SALE

I offer for sale at a moderate price a Scheidle Western transformer, table, and fluoroscope. Address 290, care of this office for particulars.

POSITION WANTED IN DOCTOR'S OFFICE

By a young woman who is an expert bookkeeper, and can do general office work. Has had six years' experience in office work. Address 283, care of this office.

X-RAY APPARATUS FOR SALE

A 220 D. C. Empire No. 1 Wappler *x*-ray apparatus used only nine months, and is in perfect condition. Present catalogue price, $650. Will sell for $400. Address Dr. P. W. Giessler, 327 La Salle Bldg., Minneapolis.

SPACE IN MINNEAPOLIS OFFICE FOR RENT

Desirable office space for physician or dentist in the Physicians and Surgeons Building, corner of Nicollet Ave. and Ninth St., Minneapolis, is offered, with reception-room furnished. Apply to Conklin & Zonne, or to room 506, P. & S. Building.

ASSISTANT OR PARTNER WANTED

I am looking for a young physician who is licensed in Minnesota to be my assistant or partner. I want a man with a good hospital training. My practice is in a town of 1,300. Give a full account of yourself. Address 294, care of this office.

LOCUM TENENS WANTED FOR THREE MONTHS

Wanted, a doctor to take charge of a $15,000 practice for three months, beginning January 15th. Can have what he makes. Reason for absence, I desire to do post-graduate work. Address A. J. Clay, M. D., Bowdon, North Dakota.

PRACTICE FOR SALE

An unopposed practice of $7,000 a year in a South Dakota town of 450, large territory, and thickly settled, Germans predominating. Within 20 miles of good hospitals. If sold at once, price will be price of office fixtures, drugs, auto, etc. Good reason for selling. Address 292, care of this office.

POSITION WANTED

A situation in a general hospital or sanatarium, or as assistant to a general surgeon, on a fair salary ($150 or equivalent a month); have had 21 years general practice; aged 54; captain in M. C., U. S. A.; up-to-date; registered in Illinois, South Dakota, Kansas, and California; have had some experience in tuberculosis and surgical work; single; good education. Let me know what you have. Address L. B. 83, Elk City, Kansas.

The thought behind the tube—

"the patient on the table"

Not "good enough" but the best from every standpoint—alone assures that degree of "Catgut Safety" demanded when the patient on the table is "ONE OF MY OWN FAMILY."

Only on this peculiarly personal basis is

"Van Horn" Catgut

supplied to the profession.

Johnson & Johnson

VAN HORN and SAWTELL DEPARTMENT,

NEW BRUNSWICK, N. J.

PUBLISHER'S DEPARTMENT

ANGIER'S EMULSION

A multitude of physicians have used Angier's Emulsion in coughs and bronchial affections for many, many years, and with a satisfaction that is not given by the best forms of cod liver oil. It is pleasant to take, never disturbs the most delicate stomach, and furnishes immediate relief, and very early control of the symptoms.

The Angier Chemical Company of Boston seek the opportunity to send samples and information.

THE HARVARD *X*-RAY LABORATORY

This Laboratory, located at 522 Syndicate Building, Minneapolis, is specializing in sinus and dental radiography, producing "films that are diagnostic." Surely, the value of a diagnostic film in the above lines is well-nigh incalculable when one considers the results that may follow any other film or *x*-ray plate.

The price of $10 charged for a truly diagnostic film of the entire mouth, is very moderate.

Such laboratories are a credit to the medical profession because of the fine results that follow their work.

DR. McKAY'S SANITARIUM

Dr. John H. McKay is conducting at Denver, Colorado, a sanitarium in which the nervous, narcotic, and alcoholic diseases are combated in a highly successful manner. It is with environment and personality that the drug addict must be conquered, and if he has gone so far as to show signs of tuberculosis, as is often the case, the hope of recovery under ordinary conditions is very slight. Dr. McKay takes these patients with a promise that if human effort can cure them, he can hold out hope.

He invites correspondence with physicians.

MOUNDS PARK SANITARIUM, ST. PAUL

The Mounds Park Sanitarium and Hospital has increased its capacity for the accommodation of patients three-fold since its establishment in 1907. It has gradually improved its various departments and laboratories so that it is now a most complete and up-to-date hospital. Its present departments include General Surgery, Medicine, Neurology, Obstetrics, and Eye, Ear, Nose, and Throat, and its laboratories Radium, *X*-Ray, Basal Metabolism, Blood Chemistry, Pathology, and Serology.

Because of its quiet and healthful surroundings and spacious grounds, it is ideally located for a hospital.

REST HOSPITAL

There are many classes of hospitals, and the physician who has a patient he desires to send to a hospital must first determine the class of hospital the patient needs and can afford. He should then seek the best hospital to be found in that class.

This statement of obvious facts brings us to Rest Hospital. Its name, which is well chosen and well deserved, defines it in a measure. Its equipment, the character of its building (an attractive "home," or residence, enlarged to meet its needs), and its location (in a fine, quiet residential district of Minneapolis) further define it.

And, again, its superintendent differentiates it. Miss Delia O'Connell, a registered nurse of long experience, with marked executive ability and a big heart, completes its classification. Its prices are moderate, and its standing in the profession of Minneapolis is very high. It is a restful hospital.

THYROID MEDICATION

The splendid results obtained from thyroid medication are exceedingly gratifying to physicians, and they often restore the confidence of both patient and physician when all other measures have failed—we mean confidence in therapeutics. But even all U. S. P. thyroids do not give hoped-for results; and the probable reason is that they are not put up at the time of year when the thyroxin content is greatest, i. e., when the functional activity of the glands is the highest.

The Hollister-Wilson Laboratories of Chicago, with their unlimited supply of material, now put up their thyroids at no other time, and so the physician may expect from their thyroids the best and most uniform results. It is always safe to specify "Thyroid H. W. L."

THE CHICAGO LABORATORY

If the personnel of a public laboratory is good evidence of what a laboratory can do for its patrons, then the names of the staff of the Chicago Laboratory are a guarantee of A-plus-1 work, for the heads of the departments of this institution are men of the highest standing. They are Ralph W. Webster, M. D. and Ph.D., of the Chemical Department; Thomas L. Dagg, M. D., of the Pathological Department; and C. Churchill Croy, M. D., of the Pathological Department.

Next comes reputation for good work done in all cases; and this the Chicago Laboratory enjoys in an eminent degree, and the growth of the Laboratory is general proof of the fact.

Containers, instructions, fee tables, etc., will be sent promptly upon application.

FELLOWS SYR. HYPOPHOSPHITES COMP.

If physicians who stand at the head of the profession, having the confidence of their fellow practitioners, and being the recognized consultants in their respective cities, will continue to use hypophosphites and will specify Fellows, and will keep this up for fifty years, then there must be real merit in the preparation or the whole theory and science of therapeutics rest upon a very poor foundation.

That leading physicians have so specified Fellows Syrup for almost fifty years and are doing so now cannot be denied; and so it must be acknowledged that these men think they get good results.

Every physician knows the indications for hypophosphites, and certainly few druggists can dispense a syrup to be compared with Fellows.

HORLICK'S MALTED MILK

No product ever stood such tests as have been given Horlick's Malted Milk, by the laity and the profession, and came out triumphant with such triumph being based upon real merit, upon quality of both palatability and nutrition. That it is a delicious beverage is attested by its universal use at the soda fountain and the lunch counter; that it is very generally used as a food in the nursery and the sick-room is demonstrated by the demand for it upon the prescriptions of physicians.

The quality of "Horlick's" has never been permitted to deteriorate one particle, and never a year passes when the demand for it does not increase.

The man or woman who, when convalescent, has not used Horlick's milk has missed one of the most delicious meals that mortal ever ate.

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The Waukesha Moor (Mud) Bath Co. has built up an institution that is doing a remarkable work. It has a fireproof modern building with all the comforts of the modern hotel, and has provided for all kinds of exercises indoors, and has a fine golf course and tennis courts outside.

The baths do the work of elimination and prepare the patient for either gentle or vigorous exercise, or both, and most of the run-down men who take the course find themselves on the mend in a very short time. The focal-infection and kindred poisons yield readily to the treatment, and the tired-out, nervous businessman is often surprised at the results that follow even a few days' course of rest, relaxation, and proper food, with the baths and exercise at this place.

BOOKS AND A BOOK MAN

A great librarian gets a knowledge of books, old and new, ancient and modern, that is little short of marvelous. Now and then a dealer in books or the head of a book-store acquires such knowledge; but rarely a man likes to have a choice line of customers for books, finds delight in knowing all about certain professional books, and is ever ready to impart his information to one of his customers and to search out just the professional book such customer wants. He seems to have a "nose" for the good books, as some men have a "nose" for news.

Such a book man is Mr. Edward J. Kimball, of Minneapolis, in the line of medical and surgical books. Just write him at 827½ Nicollet Ave. for the book you want or the information about any book you need. He has it.

MUDLAVIA

A more stubborn group of diseases than chronic rheumatism, gout, arthritis deformans, and neuritis would be hard to find, and this group seems to defy all medicaments. Each of these serious and distressing diseases yields readily in almost all cases to the "Mudlavia Treatment" as given at Mudlavia, at Kramer, Ind. The relief is often very speedy, and the temporary relief almost always becomes permanent, inasmuch as it helps nature eliminate the poison in the system which is the recognized source of the trouble, and yet cannot always be located.

The "Mudlavia Blue Book for Physicians" is sent free to physicians, and is a mine of information about diseases that arise from the obscure focal infections. It is worth asking for. Address Mudlavia, Kramer, Indiana.

MINNEAPOLIS CLINICAL LABORATORY

The Minneapolis Clinical Laboratory is the oldest public laboratory in the Northwest, and its founder and director, Dr. Henry L. Ulrich, is one of our leading and best known diagnosticians. In private practice his specialty is internal medicine, and physicians from all parts of the Northwest refer patients to him, and especially in cases requiring the use of autogenous vaccines.

It is work of this kind that the physician who has no laboratory is most in need of, and should seek in all obscure cases. The help of a high-grade clinical laboratory will often enable the country physician to save the lives of his patients and will enhance his own reputation.

It is worth while to know this laboratory, and to use it to the fullest extent in all cases needing its help.

ARMOUR AND COMPANY TAKE PRECAUTIONS AGAINST A RETURN OF THE "FLU."

The medical department of Armour and Company has taken precautions among plant employes against a return of the "flu" epidemic in Chicago and other cities where the Armour plants are located.

All employes have been notified that without charge they may have the influenza vaccine administered according to the formula of Dr. E. C. Rosenow.

In addition to offering this vaccine free to employes, a general educational campaign along health lines and particularly with reference to the "flu" is being carried on among the workers in the plant.

Dr. Volney S. Cheney, medical director of Armour and Company, reports that the employes are taking an interest in the campaign and that as a result no serious recurrence of influenza is looked for among Armour workers.

LABORATORY OF SURGICAL TECHNIQUE

There are some courses of instruction so satisfactory that every person who takes them regrets that he had not taken them years before. Such a course is that furnished by the above named institution. It seems to us that the scheme of this Laboratory was almost an inspiration; and its results fully confirm this impression.

There are very few surgeons who will not get almost invaluable pointers from the brief course given in the modern technique of surgeory by Dr. E. A. Printer, the director of this Laboratory and his associates. The student does the work himself, and is not allowed to do things wrong. He is shown until he can almost perfectly perform operations he never undertook, or, at least, never did right.

We have the utmost confidence in individual instruction that consists of directing the student how to do a thing, step by step, until he can do it by himself just as well as his instructor.

Let us say to all young surgeons, if you do not know the Laboratory of Surgical Technique, write for its descriptive folder, and you will thank us for advising you to do so.

THE WINKLEY ARTIFICIAL LIMB CO.

This Company is not only the largest manufactory of artificial legs in the world, but it is the best; and that it is the best is due to the fact that it started in business many years ago with the best leg in the world, and has kept up a pace of improvement and excellence in manufacture that held the establishment in the forefront of all makers. The Company has been under the continuous management of one family with not a few operators who have been continuously in its employ.

The management of the Company is high class, the

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Puffed Wheat
Puffed Rice
Corn Puffs

workmanship on every part of every leg that is sent out is unexcelled, and the man who wears a Winkley leg has the next best obtainable leg to a natural one.

If you do not know all these things, just ask the Winkley Co., 1326-28-30 Washington Ave. North, Minneapolis, for a catalogue.

INVESTMENTS IN THE STOCK OF PHARMACEUTICAL MANUFACTURING COMPANIES

When a group of high-class business men put a manufacturing enterprise on its feet, and make it so successful as to demand further capital to meet increased opportunities and demands, the capital stock so offered is surely a safe investment if the stock in any manufacturing business is safe; and, moreover, it is full of promise as to generous dividends.

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The preferred stock now offered for sale carries with it a stock bonus of 25 per cent, in order to make it attractive to physicians, whose membership in the company tends to give all the company stock increased value.

For particulars address the Western Chemical Co., Inc., Hutchinson, Minn.

PROPHYLAXIS OF INFECTIOUS DISEASES

Infectious diseases, such as pneumonia, influenza, tuberculosis, meningitis, diphtheria, infantile paralysis, or, in fact, any of those diseases due to pathogenic bacteria, could many times be warded off if the body were protected by a healthy blood-stream that is swarming with phagocytes.

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Wherever a disturbance of function or structure of any part of the body occurs, there is produced by these functional changes toxins which must be eliminated as waste products, in order to prevent their absorption into the circulation. This is necessary or else the body cannot regain its normal condition.

To produce proper elimination, Sal Hepatica is the ideal preparation for the practitioner to recommend, owing to its efficiency, palatability, and low cost to the patient. If frequently administered, it will aid to a considerable degree in warding off disease.

A trial bottle of Sal Hepatica will gladly be sent to members of the medical profession upon request to the manufacturers, Bristol-Myers Company, New York City.

THE EITEL HOSPITAL OF MINNEAPOLIS

Although built some years ago, the planning of the Eitel Hospital building was so thorough and complete that scarcely a single change has been made in it, either by way of alteration or further equipment. And the work done on both the exterior and the interior was so excellent that the stranger who enters its doorway today thinks he is entering a structure just finished. The beauty of the surroundings has been increased by the growth and development of Loring Park which it faces and over which it looks.

But this is not all. The hospital was founded upon principles of management so excellent that it gains the good-will and the praise of every patient who is cared for in it, as well as the gratitude of such patient's kin, who always appreciate every act of kindness to the friend or relative in a hospital.

The staff of the Eitel Hospital is a very select one, and only high-grade work is done by the members of such staff.

The last annual report of the Hospital is full of interest, for it shows the great variety of work done by the staff and the high percentage of good work, as demonstrated by the tabulated reports.

Eitel Hospital is a credit to both Minneapolis and to the Northwest.

ANTI-FLU PREPAREDNESS

Thorough investigation during the past few months has demonstrated beyond doubt that there are a great many cases of post-flu maladies still prevalent, and the toxic conditions developed from the previous attacks of influenza have materially reduced the resistive force of a vast number of individuals. This means that these former victims of the disease will be especially susceptible to attack should there be a recurrence of the epidemic.

Reliable remedies, such as will rid the system of existing toxic conditions, should be prescribed for the former flu-victims, so that tonic medication will build up a formidable resistive force to fortify these persons against recurrent attacks. Echtisia (Merrell), an echinacea compound, is an excellent remedy to prepare the way for tonic preparations and this Company also produces a highly effective tonic to follow the neutralization of the toxins, known as Syrup Albuminate of Iron.

When there is an attack of influenza, either with or without pneumonia, Proteogen No. 12 has been found of dependable value. In the clinical experiments made with this combination of plant proteins, last winter, the results were exceptionally effective, and its prophylactic influences were also highly recommended. It is one of the few preparations which seemingly possessed the capabilities to overcome the bacterial infection and build up the vitality to the point of highest resistance. There is already a strong demand for this Proteogen, probably in anticipation of recurrent attacks or a revival of the flu epidemic, and the indications all point to its very extensive use should the disease again make its appearance. It will be worth while for the physician to keep these dependable remedies in mind as a means of preparedness.

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SURGICAL TREATMENT OF ULCER OF THE STOMACH*

BY R. L. MURDY, M.D.
ABERDEEN, SOUTH DAKOTA

If we aim at the ideal, and hope to arrive at satisfactory conclusions and better treatment, we must consider carefully the underlying causative factors in ulcer. Our progress in this respect will be based upon a perfect knowledge of the disease under consideration. In this particular field we have wasted too much time speculating on theoretical problems without a critical analysis of the facts before us.

In simple external ulcers we long since have considered them surgical lesions associated with bacterial activity, but in stomach ulcers we have been inclined to throw a halo of mystery around them and to ascribe their origin and continuance to obscure and occult influences.

For the sake of consistency with known facts about ulcers elsewhere, let us assume that they do not differ materially from simple ulceration, and that difference exists only so far as their peculiar location is concerned together with modifications due to special function and secretory activity of the digestive organs. We can further assume that the bacteria concerned in the initial process of ulceration of the stomach, arrived at the stomach through the blood-stream in most instances, and were carried there in no less a mysterious manner than the bacteria which are concerned in rheumatism. They may have a similar origin in many instances (distant foci of infection), such for instance as the appendix, rectum, intestines, teeth, tonsils, and upper respiratory tract. It is, therefore, a metastatic process grafted upon tissue with lowered resistance. The lowered resistance may be both general and local, as in acute infections with bacteremia.

Therefore the process of ulceration is similar to others quite well understood, if we can accept the experiments of Rosenau and Billings, in which they obtain the bacteria and reproduce the lesions in a preponderance of cases. The process adopted by them is to secure the material of these various lesions at operation, and culture the bacteria secured. From the cultures they inject experimental animals. They kill the animal in due course of time, and make a post mortem, at which time they note the character of lesions produced. These experiments have been well enough controlled to eliminate errors; therefore a careful analysis of Rosenau's recent experiments in which he has reproduced a great number of varieties and lesions will yield much material for thought and be of material help in the final solution of these problems. With these few facts as to the etiology fairly well established, we are brought to the consideration of the manifestations of this interesting pathological process.

We can consider such factors as errors in diet, over-indulgence in food, alcohol, heat, cold, and others of this type as largely predisposing. However, ulcers may exist for long periods and escape detection. This occurs frequently from the lack of opportunity to study the condition, or the lack of comprehensive and thorough methods in diagnosis; and only some one of the complications which spells disaster drives the patient to

*Read at the Thirty-eighth Annual Meeting of the South Dakota State Medical Association, at Watertown, May 21 and 22, 1919.

the surgeon or reveals the true condition to the attending physician.

If I follow the suggestion in the title of this paper I must discuss the surgical treatment of ulcers; therefore nothing more than an enumeration of the symptoms with little comment can be attempted in this connection. The manifestations are numerous, but not entirely constant subjectively; therefore their orderly arrangement requires tact and a painstaking investigation.

The diagnosis cannot be made from a single or a few symptoms; it is therefore the orderly grouping in a logical sequence which determines the diagnosis, however many obstacles may be encountered when it comes to grouping the symptoms, chief of which are the intelligence and memory of the patient. The grouping in a given case must be established by the history of the patient, and it takes a fairly intelligent patient with a reliable memory to relate the symptoms in sequence. The symptoms in the order of their frequency based upon a large series of operative cases reported by Hill, Mayo, and others are as follows: The incidence of particular symptoms reduced to percentages is, pain, 82 per cent; persistent sour stomach, 80 per cent; loss of weight, 74 per cent; epigastric tenderness, 70 per cent; vomiting, 66 per cent; rigidity, 60 per cent; hematemesis, 34 per cent; melena, 8 per cent.

The pain is usually associated with the functional activity of the stomach, and ordinarily occurs at the time of the greatest amount of free acid as related to the part of the digestive apparatus involved. The pain may be direct, continuous, or intermittent, or it may be referred; however, much of the pain is located in the epigastrum. The points of referred pain are usually at the left over the front of chest toward the left nipple, or in the back from the tenth dorsal to the second lumbar vertebra.

Persistent sour stomach with belching of gas is often accompanied by nausea and vomiting. This is a symptom particularly noted by the patients, and they often resort to soda, food, irrigation, and forced vomiting to relieve the condition. Mayo has called attention to excoriation of the incisor teeth due to acid vomiting in this condition.

Third. The loss of weight is very variable as to the amount lost; it has varied from a few pounds to an alarming degree. The weight also may go up and down in perfect consonance with an exaggeration or intermission of the symptoms.

Fourth. Epigastric tenderness can be elicited in a very large number of cases. It is usually confined to a very small spot in the epigastrium, varying slightly as to location, depending on the part involved and the position of the stomach.

Fifth. Vomiting is fairly frequent—66 per cent in this series. It is usually of an acid character, and occurs at a rather definite time in relation to the taking of food. Some of the patients with a very irritable stomach vomit as soon as food hits it; in others it occurs at the height of the acid.

Sixth. Rigidity has been noted frequently. It occurs as a reflex process to splint the irritated stomach, and, like local tenderness, bears some relation to the depth of the ulcer, the irritation to the peritoneum, and impending perforation.

Hematemesis does not occur as frequently as some of the other symptoms, but is of great importance and quite diagnostic when it does in connection with other symptoms. The amount of blood vomited may vary from a mere trace of coffee-ground vomit to large quantities of bright-red blood; indeed patients have bled to death in a few minutes when a large vessel is eroded. Blood may be vomited, and passed by the bowel at the same time in large hemorrhages.

Seventh. Melena does not occur frequently, but it is a grave symptom. The loss of blood per rectum may be very great; in some instances sufficient to lead to a serious anemia or death.

Eighth. Hiccough has been a troublesome and annoying symptom in a few instances. The most consistent features of ulceration of the stomach are chronicity and periodicity. Frequently the history reveals a long-standing digestive disturbance of rather severe type with many remissions and reappearance.

The incidence of ulcer is more common in men than in women. It occurs at all ages, but is more common in adult life. As to age incidence: it occurs earlier in life in women than in men. Many of the symptomatic ulcers of young girls are not ulcers but anemia. It is therefore symptomatically more common in women, but potentially more common in men.

The history of these cases often portrays a picture so distinctive as to be diagnostic, but where it is not satisfactory and clearly indicates the diagnosis, further study must be instituted. Much information can be obtained from a chemical analysis of the stomach contents and the physical condition of the patient and the stomach. For the purpose of further study and verification a physical examination of the patient and chem-

ical and microscopical examination of the stomach contents may be made, also *x*-ray examination of the stomach.

Our best aid to diagnosis is, therefore, a carefully controlled *x*-ray examination. This may be both fluoroscopic and radiographic. Defects and deformities are the most constant findings in this connection.

A constantly high-acid condition, while suggestive in connection with a typical history, is not to be relied upon unless well supported by other findings, as non-ulcerative hyperacidity will give constant high-acid finding. Ulceration of the stomach is also subject to many complications. These are also too numerous and too extensive to discuss in detail in a paper of this character.

Most common perhaps is hemorrhage; perforation also frequently occurs, and when it occurs acutely it leads to a distinctive and alarming set of symptoms and speedy death unless treated surgically. Acute perforation is, therefore, an intra-abdominal emergency of the first magnitude. Many minor complications, such as adhesions and inflammation by contiguity of other organs, obstruction of the bile and pancreatic ducts, obstruction of the duodenum and pylorus, hour-glass contractions, and other complications, are frequently noted.

The surgical treatment of ulcers should receive our most thoughtful consideration. Its proper application when skillfully performed fills one of the most charming and interesting chapters in abdominal surgery of the modern type. Nowhere in surgery has the skillful hand of the surgeon averted so many disasters, prevented more morbidity, or enhanced life, liberty, and longevity to such an extent as in ulcer and stomach surgery. When we consider the number of persons with hemorrhages, perforations, and other surely fatal complications who have been rescued every year by the abdominal surgeon, and then add to this the myriad of cases in which morbidity has been relieved, we can have only a fair idea of the great good that has come from the development of this branch of surgery alone.

There is so much argument in favor of the surgical treatment of ulcer, when properly applied and skillfully performed, and so little argument against it, that it has the preponderance of evidence and the consensus of scientific opinions in its favor.

The surgeon who sees the ulcer at operation is the only man who knows for certain that he is treating an ulcer; and you cannot establish by any positive proof that subacute or chronic ulceration is ever cured in any other way. Surgical treatment in the hands of a skillful surgeon has less mortality than medical treatment. Surgical treatment timely applied will avert the fatal complications and prevent morbidity in a very large percentage of cases. We also know that, in addition to the known number of fatal complications that can be averted, much morbidity known and remote can also be prevented.

Chief among the remote consequences of ulcers is cancer. Wilson and McCarty found that 71 per cent of the cases of stomach cancers were grafted upon stomach ulcer, and also a large number of the cases of ulcer showed beginning cancer degeneration.

Another remote consequence of ulcer is embolism. Emboli from stomach ulcers have been known to land in every place in the human body where it is possible for an embolus to lodge, the most frequent of which locations are cerebrum, lungs, kidneys, legs, and mesentery.

The fact that practically all these remote consequences of ulcer can be averted by timely surgical treatment is an argument that stands alone, and is self-sufficient and important enough to justify the procedure. Among many important reasons that justify and demand the surgical treatment of ulcers is the fact that frequently ulcer occurs in association with some other lesion which demands surgical treatment for its relief, and can be operated on at the same time without adding seriously to the risk. In fact, I make it routine practice to remove the appendix, if diseased, when I am doing a gastro-enterostomy. In this connection I have been impressed with the frequency of surgical lesions found about the appendix and cecum as concomitant lesions. This frequency has impressed me with the view that the appendix and cecum furnish one of the common focal lesions and are the possible source of the bacteria which initiate the ulcer process, as a careful checking of the histories indicates disease in this region many times preceding the ulcer.

The frequency of a diseased appendix as the possible source of the bacteria, suggests the importance of a painstaking examination of all the organs when the abdomen is open, as practiced by many good surgeons. Time will not permit me to multiply these arguments.

Assuming that the investigation in a particular case has reasonably established the presence of an ulcer of the chronic or subacute type, or other lesions which justify an exploration, then the

incision should be so placed as to make accessible as much pathology as possible, and should be long enough to permit a manual examination of all the abdominal and pelvic organs. With this in mind the operative field will be made accessible, and the operation made easy to execute. It will prevent errors in method from unsuspected or hidden pathology. With an incision properly placed and the intra-abdominal examination completed and the accessory surgery, such as for the appendix or gall-bladder, finished, the surgeon is prepared to select the type of operation best suited to the pathology. Ordinarily, the type selected will be a posterior gastro-enterostomy with no loop or improper angulation to produce a vicious circle. The operation and the selection of a field for the anastomosis can be much facilitated by drawing out the transverse colon and stomach, and making a gentle traction on the colon to bring the jejunum into view. After the jejunum is secured in a way that will prevent a vicious circle the gastrocolic omentum can be punctured, care being taken not to injure a blood-vessel in it, and the posterior part of the stomach can be pushed into view and secured for the operation. It is probably well to make the anastomosis as near the pylorus as circumstances will permit. After the stomach has been clamped, and the jejunum brought up to it for suture, the operator may select any one of several good methods. I much prefer the Mayo-Moynihan type of operation.

Instruments and materials are pretty much a matter of personal preference, yet the proper selection of the materials may determine the success or failure of the operation; therefore the importance of material, the type, and the workmanship. Linen and silk sutures have been largely abandoned for pure catgut or absorbable material, as many recurrences were due to this material being retained beyond the period of healing.

The tendency is to simplicity and good workmanship. This tendency has made some of the mechanical devices, which were so valuable in their time, seem quite obsolete, as, for instance, the Murphy button. Some even do away with clamps, and depend entirely on the stitches. Coffey, of Portland, Oregon, has devised a splendid technic, which eliminates the objectional feature of the clamps.

Among other features which enter into the discussion of the surgical treatment of ulcers are the excision of the ulcer-bearing tissue, the closure of the pylorus, and the correction of defects. Excision of the ulcer takes the operation out of the realm of simplicity and adds materially to the danger without securing sufficient compensating advantages to justify the measure. The occasional excision, particularly in deep infiltrated and chronic ulcers with a cancerous tendency and some others, is desirable and urgent. The location of the ulcer, together with the local and general condition, will also, in a measure, determine the advisability of excision.

Ulcers on the greater curvature of the stomach and near the pylorus that can be brought under the alkaline secretions of the duodenum, show a greater tendency to heal spontaneously after gastro-enterostomy than those that cannot be alkalinized. The observation of Dr. C. H. Mayo, that gastro-enterostomy greatly lessens the acidity of the stomach and that cancer seldom occurs where the tissues are bathed in this alkaline secretion, can be put to practical use in this connection. To use Mayo's own words, "the patient after gastro-enterostomy is performed furnishes his own drug-store," and this removes the indication for the administration of great quantities of soda bicarbonate and magnesia, which is so highly prized by some of the devotees of cream, milk, and alkali.

Further, this added feature must be determined somewhat by the skill of the operator. The surgeon must know his own limitations, and not exceed them. It is hard to lay down a rule on paper for justifiable, desirable, and necessary excision. Excision, as stated above, is more necessary in cases with the ulcer situated high and out of contact with the alkaline secretions of the duodenum than ulcers at the pylorus.

Closure of the duodenum is scarcely ever necessary. It is a procedure of much less merit than excision or resection of the ulcer and no one has clearly defined the indications, but, if I may add my own observation, I should say it was harmful, dangerous, and a very questionable procedure under any circumstances.

FOR DISCUSSION SEE PAGE 672

TREATMENT OF GASTRIC ULCER*

OWEN KING, M. D.
ABERDEEN, SOUTH DAKOTA

For all practical purposes the treatment of ulcer of the stomach is essentially that of hyperacidity and hypersecretion. Whatever idea one may have in regard to the pathogenesis of gastric ulcer there can be no doubt that the irritative secretory disorder plays a prominent part here. Whether the secretory disorder is the underlying cause of the whole process or merely accompanies the formation of the ulcer, its presence is responsible for the development and chronicity of the ulcer, and its successful treatment is a requisite condition for permanent cure.

The treatment of hypersecretion and hyperacidity means the prophylactic treatment of the ulcer. Erosions and ulcers have a tendency to heal under appropriate treatment, but new ulcers are liable to develop on the same basis unless the irritative secretory disorder is properly attended to. The inclination of patients and physicians to attend to this indication thoroughly and for a longer period after a very profuse hemorrhage probably accounts for the fact that many of the patients who once experienced severe hemorrhage get a good final result.

The first thing, and one of the most important, in the successful treatment is absolute rest in bed for a period of at least three weeks. This lessens the gastric secretion, thus promoting a more rapid emptying of the stomach. Most cases of peptic ulcer occur at, or near, the pylorus. The action of hydrochloric acid on the raw surface causes a spasmodic action of the pylorus and therefore prevents the normal emptying of the stomach.

The purpose of medical treatment is to produce conditions in which the stomach contents are neutral or alkaline in reaction, in order to remove the irritation at the pyloris. When this condition is obtained and the stomach can empty in a normal period, nature will heal the ulcer if properly aided. I believe that many of the unsatisfactory results in the medical treatment of peptic ulcer are due to the fact that the management is not carried out in enough detail, and the amount of secretion is not carefully controlled by alkalis. I have used the treatment as outlined by B. W. Sippy, of Chicago, in many cases and have had uniformly good results. The routine I have used is about as follows:

At 7 A. M. the patient is given a powder (No. 1) containing 10 grains of calcined magnesia and 30 grains of sodium bicarbonate; at 7:30 A. M. an ounce and a half of milk and an ounce and a half of cream; at 8 A. M., a powder (No. 2) containing 10 grains of bismuth subnitrate and 30 grains of sodium bicarbonate. This treatment is followed during the day, the powders being given on the hours and the milk and cream on the half hours up until 8:30 P. M. At 9 P. M. the stomach is aspirated carefully, and the contents sent to the laboratory for examination, which includes an examination for occult blood and the determination of the free and combined HCl. The combined HCl causes no symptoms and probably does not cause much erosion. If the examination shows an absence of free HCl the same-sized powders are given the following day which were used on the previous day. If on the other hand, free HCl is present, the sodium bicarbonate is increased 10 grains in each powder, and the same routine is carried out for the next day. At nine o'clock on the second night and on each night afterwards, the stomach is aspirated and an analysis made. In this way we can determine whether or not we are controlling the HCl, thus removing its irritative action on the ulcer. It is very gratifying, indeed, to see cases which on the first few days present marked symptoms of obstruction to see the amount of retention gradually decrease until in a few days the nine o'clock aspiration will give a normal amount of stomach contents. I have had one or two cases which, when aspirated at nine o'clock, showed an almost complete pyloric obstruction,—that is, we would obtain as many and usually more ounces of liquid than were given during the day. After a few days of treatment the amount aspirated gradually decreased to normal.

About the third day an egg is given and on the fourth day an egg and a cereal. Each day following the diet is increased by the addition of an egg or a cereal until two weeks have passed. Usually by this time there is no retention, and the free HCl has been controlled for some time. If at any time during the night the patient complains of irritation, burning, or pain in the stomach, it is aspirated and the contents

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sent to the laboratory for examination. Occasionally, we find cases which seem to have a hypersecretion at night, and it may be necessary to control this by administering a few powders at irregular intervals. The patient is soon taught to aspirate his stomach himself, and, usually at the end of a week, he can do it with less discomfort than if aspirated by a nurse.

Cases of bleeding ulcer will show the presence of blood, usually, only for a few days when under this treatment. It is generally necessary to examine the stools for occult blood, for, if the ulcer is on the duodenal side of the pylorus, we will not obtain the blood in the stomach contents.

If the free HCl and blood and the retention have been properly controlled for a period of three weeks, the patient may be discharged from the hospital, but must follow certain instructions in regard to diet and rest. I always supply the patient with an Ewald stomach-evacuator in order that he may aspirate his stomach at nine o'clock and make a qualitative test for free acid each day. Patients soon learn to use the indicator, and, if they find free acid is present, they increase the size of the powder for the next day or two. The length of time that they are under observation depends on the severity of the case and the results of treatment. I might add that all patients who have any evidence of focal infection, arising from bad tonsils, teeth, or infected sinuses, should have these things corrected before treatment is started. There is no doubt that some patients who have been under medical management for gastric ulcer will return in a year or two with a recurrence or a new ulcer. The question then remains, Is this a recurrence of the old ulcer or has a new one developed due to some causes which have been overlooked or undetermined? I am satisfied that very few patients who have followed this medical treatment in detail will have a recurrence. The results, as a whole, will certainly be more satisfactory than with surgical treatment, for the principle of surgical treatment where a gastro-enterostomy is performed is to produce a rapid emptying of the stomach. I believe that every case that has been treated surgically should be followed by an appropriate medical treatment in order to give the ulcer every opportunity to heal. In cases where gastro-enterostomy has been done, the *x*-ray shows that the artificial opening is used only as long as there is obstruction to the pylorus, either of an anatomical or a spasmodic nature. As soon as the pylorus can functionate normally, most of the food passes through that outlet. I do not say that every case of peptic ulcer will respond to medical treatment. There are, no doubt, cases of marked pyloric obstruction from old scar tissue of healed ulcers, and the stomachs that will not empty after the spasmodic feature of the pylorus has been eliminated, must have surgical treatment. There is an actual mortality of 3.5 to 4 per cent in gastro-enterostomy under the best surgeons, and 10 per cent mortality with the average surgeon, while with the medical treatment there is practically no mortality.

I have no intention of advocating stubborn persistence in medical treatment in cases where we observe no response or in cases where we find the patients losing ground. No one can doubt that the great majority of ulcer cases are curable by properly applied medical treatment. In discussing and comparing surgical and medical treatment the question should not be whether to prefer one or the other on general principles. Each has its field, and each has its justifications and limitations where medical treatment is at least superfluous. Personally, I have become more and more convinced that the many failures of medical treatment must be attributed to superficial application of proper medical management during an insufficient period of time and a failure to recognize the principles upon which a cure is based.

DISCUSSION OF THE TWO PRECEDING PAPERS

Dr. M. H. Ebert (Webster): In spite of the good work which has been done, both medically and surgically, in the treatment of gastric ulcer, there are still many problems which remain unsolved. I refer particularly to the physiology and the pathology of this condition.

Both the medical treatment devised by Dr. Sippy and outlined for us by Dr. King, as well as the surgical treatment by gastro-enterostomy, are purely symptomatic, for the reason that they do not reach the cause of the condition. In making a gastro-enterostomy, we alkalinize the area and prevent obstruction, getting rid of the acid food. In the Sippy treatment we neutralize the acid by use of bicarbonate of soda and calcine of magnesia. We have relieved the symptoms, but the obscure cause of the ulcer has not been reached. We have recurrence of symptoms to fear.

The nearest approach to an explanation of the pathology of gastric and duodenal ulcer has been made by the work of Rosenow and Billings, who have proved that in certain cases the ulcer is a focus of infection caused by streptococci. If the ulcer is a secondary focus of infection, we must look for the original focus, as Dr. King stated.

Thus the surgical treatment has a certain advantage over the medical treatment. When the abdomen is opened an exploration may be made. Often the focus of

infection is discovered—perhaps a chronically infected appendix or an old cholecystitis.

I have used the Sippy treatment very successfully in my practice. It is an excellent symptomatic treatment and cures the symptomatology. It must be remembered that, if this treatment is to be employed successfully, an accurate diagnosis must be made. We must distinguish between the nervous patient with hyperchlorhydria and the patient with similar symptoms, but a real lesion. Neither the patient's account of his symptoms nor laboratory findings may be absolutely relied upon. A more accurate diagnosis may be secured by the use of the *x*-ray, with a good fluoroscope, a competent observer, and good plates.

Dr. Arthur T. Mann (Minneapolis, Minnesota): This question of gastric ulcer is not the medical man versus the surgeon; it is one for the medical man and the surgeon. There are ulcers which should be treated medically, and there are other ulcers which should receive surgical treatment. The soft ulcer, the erosion, the crack in the mucous membrane, is essentially a medical ulcer and should be treated by the medical man.

Everything that has been said relative to the diagnosis is absolutely fundamental. With the *x*-ray one can almost be absolutely sure in his diagnosis of an ulcer, and if one has a subacute or chronic ulcer to deal with, with complications, it belongs to the surgical class. Hemorrhage alone does not make an ulcer a surgical ulcer. We sometimes have hemorrhage as the first symptom of ulcer, or we may have a long series of symptoms of an ulcer and finally find a little blood in the stool. That is fairly sure for diagnosis but not absolutely sure. Repeated hemorrhages of the larger type make one practically absolutely sure of the diagnosis even without the *x*-ray. Of course one can get a little blood from hemorrhoids and from some other conditions. An ulcer does not usually give a history on which one can make a diagnosis because it gives one a series of symptoms which may come from a number of medical conditions. After a time one may be more certain of the diagnosis. But if one finds a long history, which should be an ulcer history, and there have been repeated hemorrhages, we are getting into the subacute and chronic class. Those ulcers are properly treated medically at first; they yield readily to medical treatment. They are medical ulcers, strictly speaking, and in my opinion if they do not yield to a reasonable amount of medical treatment they become surgical.

Then there is the other class in which we have the scars near the pylorus producing stenosis, retention of food in the stomach, dilatation of the stomach, retention of food in the stomach, etc. Those are surgical cases. The stomach needs some way to get rid of its contents and a gastro-enterostomy affords that relief. The scars and induration together sometimes produce stenosis. We sometimes have a large crippling scar which causes an hour-glass stomach, a more or less hour-glass irregular stomach, and that puts it into the surgical class in a good many cases where these symptoms persist. Where we have complications, such as adhesions, which occur about the peritoneal surface over ulcers which have been going on for some time, we have adhesions to the neighboring organs of the peritoneum which are giving symptoms, it may not be necessary to resort to a surgical procedure, but if they are giving constant symptoms they are surgical ulcers and the adhesions should be separated. Then we get into the more active complication of a perforation, and there is no question but that these cases are surgical ulcers. Then, going back to the question of hemorrhage, if we have hemorrhages which are repeated and cannot be relieved by medical means, and the patient has much trouble, relief should be had by surgical measures. Gastro-enterostomy and other surgical procedures instituted at the time will afford relief for a much longer time than any medical treatment itself. I feel very strongly in regard to that and my experience bears it out. Hemorrhages from a gastric ulcer do not call for surgical intervention quite as early as hemorrhages from a duodenal ulcer. A duodenal ulcer is less likely to heal than a stomach ulcer, and with repeated symptoms from a duodenal ulcer a gastro-enterostomy is indicated fairly early and practically always stops the hemorrhage.

In the old indurated ulcers it is sometimes difficult at the time of the operation to say one has not a carcinoma to deal with or that it has started. These ulcers, if possible, should have excision of the ulcer bearing area as well as the gastro-enterostomy.

I have felt very much as one of the essayists does with regard to the closure of the pylorus. It has been advocated because it is a new procedure, and there are ingenious ways to bring about the closure of the pylorus, but the results are so good after a gastro-enterostomy that it seems to me an unnecessary procedure except in the very special cases. It is true that with a gastro-enterostomy, and without stenosis at the pylorus, a good deal of the food still goes through the pyloric opening. That was shown by Cannon and others in Boston by the barium meal and the *x*-ray. They could see it go through the pylorus. This was shown in New York by putting a bullet on a string and letting the dog, on which a previous gastro-enterostomy had been performed, swallow the bullet. The bullet would go down and sometimes it would drop through the gastro-enterostomy opening and very often would go through the pylorus, and in one case it bobbed up into the stomach and went through the pylorus again. With the pylorus open, some of the food does go through, but we have two or three questions to consider here. One is, when the ulcer is in the surgical class, or if judged to be in the surgical class, it is a question whether gastro-enterostomy will give relief. We find that it does in a larger percentage of cases than any other method we know of. The next point is, can the patient go along without damage and live a vigorous life after he has had a gastro-enterostomy? There have been some interesting experiments made along that line. Patterson, of London, England, has very carefully made and analyzed the stomach contents of patients after gastro-enterostomies anywhere from twenty-four hours afterwards up to several years thereafter, and has made chemical analyses to see what the percentage of the absorption of proteids would be, what the percentage of the digestion and absorption of the fats would be, and he found that his highest percentage proved to be about 97 per cent of normal absorption, his lowest percentage 91 per cent, and the average about 93 and a fraction per cent of the proteids. Regarding the fats analyzed, he found it to be 98 per cent for the highest and about 91 and a fraction per cent for the lowest, so that it was about 94½ per cent as an average. Then a physiologist took a large number of supposedly normal people and made the same analyses. Patterson found his analyses for proteids fell only 2.4 per cent below the average of all these normal people,

but the 2.4 per cent was above the percentage of some of the normal cases, so that it did not make very much difference. This was true for the digestion of the fats also. His analyses showed a diminution of only 2.7 per cent below the average normal and still was above some of the normal cases. The patients were able to digest their food and get the absorption out of the proteids and the fats with the gastro-enterostomy. There we have our answer. It does give the results in the cases which are surgical, and the patients can live in full health after a proper gastro-enterostomy.

The question of dealing with the ulcer is a big one, and I think what I have said about the excision of some of these ulcers covers most of it. Some of the ulcers can be sutured over by folding in. Some may be punctured in the center with the electric cautery and the opening sewed up again; that destroys the base of the ulcer and perhaps allows of a little better healing. Some of the ulcers may be left alone.

Dr. Finn Koren (Watertown): It would be interesting to review the merits of all of these papers and to attempt to elucidate the truth of everything that has been said, but it might be well to balance up things a little bit. It occurs to me that there are two sides to the question of gastric and duodenal ulcer. There are a medical side and a surgical side, and the position we take here at our clinic is to treat these cases medically first, but that depends upon the type of lesion, as Dr. Mann brought out. In some cases we discover that the ulcer is surgical from the beginning, and we proceed with surgery; however, in order to proceed with surgery, there must be the surgical indications, and the chief indication is stasis or obstruction. In order to obtain a good result from a surgical procedure there should be present stasis, and if that is present you will get a very good result from your surgical work. In speaking of the surgical side of this question there are several factors to be considered. There are the danger of the anesthetic and also the danger of the operation. Together they amount from 1 to 3 per cent in the various clinics of the country. Moreover, when a surgeon has done his work, he will often find that he may have to do it over again on account of complications that may arise. These complications may be early or late. For instance, in the operation for short-circuiting in a case of duodenal ulcer there is post-operative hemorrhage in 16 per cent of the cases. That is a point that has to be considered. That is almost a higher percentage of hemorrhage than we would get before operation.

Another thing is, that in gastric ulcer, in short-circuiting, we have post-operative hemorrhage in 7 per cent of the cases. These figures you cannot get except by reviewing the literature on the subject. For instance, if you review Smithies' figures in the 1917 transactions of the Gastro-enterological Section of the American Medical Association you will see he reviews 9,000 cases that had come under his personal observation, and of this number he found 2,400 warranted surgery, and of these only 273 warranted gastro-enterostomy. Of the 273 patients, 142 complained chronically; that is, their trouble persisted in spite of gastro-enterostomy. He found in 24 per cent of the cases the trouble was due to hypersecretion and hyperacidity, which was persistent, and for that matter they will persist in spite of medical treatment because, as the doctor who spoke in rebuttal said, the whole story is the treatment of symptoms. The real story remains to be told, and there is no panacea in the medical or in the surgical treatment, and when you get the indications as pointed out by Dr. Mann and Dr. Murdy, then surgery is warranted. But when the indications are not strong, surgery is certainly not warranted.

There are some complications, for instance, of post-operative surgery for ulcer which we cannot control. There is spastic stoma that occurs, and the surgeon is helpless. I believe Dr. Mann mentioned spasm or stenosis of the pylorus. The newly made stoma may become stenosed, and the work has to be done over again. You may have post-operative hemorrhage independent of the ulcer area, and another thing you may get is post-operative ileus in spite of little handling of the intestinal tract. Another thing you may get as a post-operative complication is diarrhea, due to the lack of tone in the new stoma. Another thing you may get is a fistula between the stoma you have made and the colon; and another thing you may get is the development of adhesions around the operative field, and so on.

Reviewing the post-operative results on a percentage basis, we find that out of every one hundred cases in which operation is done for the short-circuiting of an ulcer, twenty are cured, four are dead, eight are made worse by operative procedure, and sixty-eight have more or less disability remaining after the operation. Such figures should make the surgeon have very clear-cut ideas about the need of gastro-enterostomy. In our clinic we treat ulcer cases medically first, and if the disability continues in spite of prolonged medical treatment, such disability as stasis or obstruction gives rise to, or if the complication of perforation should arise, we resort to surgery. The patient who has stasis is the one who gets results from his operation. The patient who merely has an ulcer and is operated on often finds that his disability persists.

Dr. E. O. Giere (Watertown): We have had some experience at our hospital with the Sippy treatment for the last four years under the direction of Dr. Koren. Some of the patients treated have apparently been cured, but sooner or later a good percentage of them have returned, still complaining. I believe the Sippy treatment is based on the most rational principles of all of the various medical treatments for ulcer. I question very much the soundness of the statement made by Dr. King when he says that the medical treatment of ulcer has no mortality. I am inclined to believe that if everything is considered, the mortality following medical treatment is at least as high as, or higher than, that following surgical treatment. Following the medical treatment, the symptoms improve and perhaps the patient is discharged as cured, but when, later, he succumbs to either hemorrhage, perforation, obstruction, starvation or cancer, must not this be considered sequence of medical treatment? Your patient was "cured," but he died as a result of the cure. The symptoms were temporarily improved, but the disease was still there. I believe that in cases not complicated by pyloric obstruction the patient should be given the benefit of a course of medical treatment, but if the patient does not respond to this treatment, or the trouble after subsiding continues to recur, the case should be considered surgical.

In the surgical treatment of ulcer, the thing of first importance is that the ulcer is really there. If you operate for ulcer when no ulcer is present, the operation will, of course, be a failure. If the ulcer is there the chances are that your patient is going to get well whether you do a

gastro-enterostomy alone or excision of the ulcer with gastro-enterostomy. Whether gravity or chemistry or the two combined are responsible for the cure, is as yet problematic. I recall in this connection a visit at the London Hospital in 1914. The surgeon operating on an ulcer patient that morning stated that he had made a practice for some time to treat every other case of ulcer with gastro-enterostomy alone, and every other case with excision and gastro-enterostomy. He had up to this time, as I remember, operated on some 116 cases in this way. He summed up his results as follows: "So far as I can see, there is no difference in the results; one is as efficient as the other. I am inclined more and more to the idea that gastro-enterostomy alone is sufficient and will cure these cases."

The thing of greatest importance in the treatment of ulcer is the diagnosis. Moynihan says he can diagnose ulcer on the history alone. I don't doubt it, but we are not all Moynihans. Sometimes neither the history, clinical findings, nor *x*-ray will clear up the diagnosis and then nothing but the "illuminating lancet," as Dr. Deaver puts it, will be able to decide it. Then when you are in the abdomen with touch and sight, if you can demonstrate the ulcer, go ahead and operate. If you fail to find an ulcer, do not operate, regardless of your previous diagnosis.

Dr. Murdy (closing on his part): I feel that this discussion has been drawn out almost too long, and the hour is getting late.

I shall not try to enter into a discussion, and consider all the evidence that has been produced, but I wish to emphasize a few points, the chief one of which is, that we must make a careful investigation and remove the underlying cause of the ulcer. I recognize that stomach ulcer is one of these borderline diseases which probably comes within the domain of the internist and surgeon. I wish further to emphasize the fact that we should not allow the internist to get too cockey about these cases, and cure all of the ulcers with medicine; and, if I were operating for gastric or duodenal ulcer, I should hate to have such a rotten bunch of statistics as Dr. Koren gave us. (Laughter.) In my own work I am not having such a percentage of hemorrhages post-operative.

The point was made by several speakers that one could demonstrate positively that we are dealing with ulcer before we do a gastro-enterostomy. I think if surgeons were conservative about this and would not operate unless they can demonstrate that the ulcer has gone beyond the acute stage, that they are dealing with a subacute or chronic process, and can demonstrate it at the operation and at the time of the operation can remove all of the abdominal foci of infection where the bacteria originated and probably started the individual process of the ulcer—if they can make a painstaking examination of the patient beforehand and eliminate the foci of infection in the respiratory tract, the sinuses, and other foci of infection, the results will be uniformly good.

Dr. King (closing on his part): The statement I made in regard to the mortality under medical treatment was probably rather ambiguous. I mean that there was practically no mortality while the patients were under the active medical treatment. I was fortunate in being connected with Dr. Sippy's service for some time, and he had all the way from fifty to one hundred patients under observation all the time, and for a period of several months none of them developed perforation; none of them had a severe hemorrhage. They practically all improved under the medical treatment, and if they died of perforation after they left, probably in the course of six months or a year, their death, of course, is due to ulcer, but you cannot lay it to the fact that the medical treatment was not successful, and that a new ulcer may have developed, or the patients, after they left the hospital, did not carry out the instructions properly. There are people who have undergone careful and rigid medical treatment who will ultimately die as a result of having stomach ulcer, but I think more will die who are operated on for a stomach ulcer because of the actual mortality connected with gastro-enterostomy, and in the hands of the best surgeons I think it is from 3.5 to 4 per cent. In some instances the mortality is as high as 10 per cent from gastro-enterostomy because gastro-enterostomies are being done all over the country. A lot of men undertake gastro-enterostomy who have no business to open the abdomen, and of course they will get a higher mortality than the more skillful surgeons.

In speaking of the diagnosis of peptic ulcer—that is the main thing. There are a lot of people who are treated for stomach ulcer who never have it. They may have bowel trouble, colon trouble, which may be due to some dietetic error, and are given ulcer treatment with very little results after they have gone through the treatment. That is due to the fact that an error was made in diagnosis.

In making the diagnosis there are four points to take into consideration. I do not think you could make an accurate diagnosis on any one of these four points. They must be grouped together. The first is a very careful and accurate history covering a long time. You must go back from the first symptom, and some of the chronic cases develop over a period of four years. You must spend a long time to find out whether the pain or distress they have is relieved on eating; whether they have it or not, and whether they have pain or vomit after eating, and whether they get relief from eating. The second point in the diagnosis is the laboratory examination. By that I mean examination of repeated Ewald test-meals and motor meals. We should not be satisfied with one or two test-meals to determine the amount of combined acid and blood. We should make Ewald test-meals several times, and Sippy shows that the average free acid runs from 20 to 40,—that is, anything below 20 is not normal, and anything over 40 is considered abnormal. Some of these patients run a free acid as high as 90 or 100; a great many of them 60 and 70. There is the laboratory test, the Ewald test, and the motor meal. The motor meal consists of coarse vegetables—carrots, turnips, tea leaves and raisins, which are given and aspirated in 6 to 7 hours, and the normal stomach is supposed to empty itself in a period of 6 to 7 hours. In some cases there is marked obstruction either of an anotomical or spasmodic nature, and in these we will get back practically all of that motor meal, given six or seven hours before.

A third point in considering the diagnosis is the *x*-ray. There is no doubt there are some *x*-ray experts who can put their finger on an ulcer, but where you find one man who can do that, who is treating stomach ulcer, you will find hundreds that cannot. I think one of the main aids of the *x*-ray for the average practitioner is to determine with the fluoroscopic test whether the stomach functionates properly; whether there is an increase or decrease

in peristaltic action, which would indicate obstruction at the pylorus; whether the position of the stomach is right; whether there are any adhesions or hour-glass condition, and then take three pictures. The first picture should be taken immediately after the fluoroscopic examination, which will give the position of the stomach. The second picture is to be taken three hours after the first, which will show whether there has been an emptying or not, whether the bismuth has passed through the duodenum into the small intestine. And a third picture is to be taken six hours after the meal is given, which will show whether there is any retention at the end of six hours, and will enable us to determine the amount of bismuth given. If we give large amounts of bismuth in buttermilk there will be a good deal of retention, but if we give probably a couple of glasses of buttermilk and bismuth there should be very little retention at the end of six hours. In cases of obstruction we may find complete retention after six hours: there is where the *x*-ray is of great value to the average practitioner who is using it for diagnosis.

The fourth and most important thing, which is not carried out very much, is the therapeutic test. We have a patient come in complaining of gastric symptoms. He should be in the hospital, and be given a therapeutic test, which will consist, first, in instructing the interne about what to expect, and the patient should be given several meals of coarse vegetables—carrots, turnips, rutabagas, tea leaves, raisins, and things like that; and a careful note should be made whether or not these distress the patient, how long after he takes this meal he feels gastric distress, and whether when this distress comes on it is a good deal like what he had during the past. The stomach should be aspirated at the time, and note should be made as to whether the distress is relieved by the aspiration. Then the chemical test should be given, which is one of the most important tests of all,—that is, when the patient any time during the night or day complains of this burning feeling or distress or uncomfortable sensation the alkalies should be given, and there is no other abdominal condition which will get relief by the administration of alkalies other than in the hyperacidity with a stomach ulcer. We have a patient complaining of almost excruciating epigastric pain, and if we give the patient a good, big taste of calcine magnesia and sodium bicarbonate, in ten or fifteen minutes that burning is completely gone. That is an important therapeutic test, and that burning may be absent for a period of an hour or two, and it will appear again. We give alkalies again, and we get relief. That is a very important aid in the diagnosis, and one that should be carefully followed out.

At one time during my service with Dr. Sippy there were fifteen gastro-enterostomy cases sent there for medical treatment. Several of the operations had been done by the Mayos, and others were done at different places. A fluoroscopic examination in some of these cases had been made several years before. When the patients were put under the fluoroscopic, and given the bismuth test-meal it was noticed that all of the bismuth went out through the artificial opening at first. If the stomach was lax, as soon as peristalsis began, as soon as the stomach contracted, practically all the bismuth went out through the pylorus and very little through the artificial opening.

Dr. Murdy and I have had a good deal of fun in arguing the pros and cons of this treatment.

MEDICAL EXAMINATION OF SOLDIERS ABOUT TO BE DISCHARGED FROM THE ARMY*

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The uppermost thought in the mind of almost every man presenting himself at a cantonment for discharge was to get home as quickly as possible. He might have waited patiently at the port of debarkation for days, or he might have been held twenty-four hours to parade in Chicago, perhaps against his will, yet when he had reached the last camp a delay of a few hours seemed intolerable. This consideration, added to the enormous expense to the Government of maintaining large numbers of troops, even for one day, prompted the authorities to speed up as much as possible the final examinations of the candidates for release.

There will be no effort in this informal and hastily prepared paper to deal with medical examinations for demobilization from a scientific or a statistical viewpoint, but it has occurred to me that perhaps it might be of interest to give some account of the manner in which the men were run through their physical tests.

There were several aims in this examination, perhaps the most important, since it touched all soldiers, being their proper classification in the Army. Of that, mention will be made later. Then, there was, of course, the determination of disability in all cases where accident or disease or any other factor had lessened the soldier's physical grade. There were also certain candidates for release who were up for re-enlistment and they received a rigid physical examination as a preliminary step.

In speaking of the modus operandi of final physical tests, there is reference in this paper only to the method in use at Camp Grant, where I was connected with the Review Board for six

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months. The routine discharge medical work there was divided into two parts, that done by the general examining board and that done by the Review Board. After being carefully registered by their organizations, the men presented themselves stripped, and were gone over thoroughly by the general board, which was composed of officers making cardiovascular, genito-urinary, eye and ear examinations, and so on. Every soldier was tested for each condition, and if he was found practically sound he was placed in class A, his examination being a comparatively short process. If, on the other hand, there was any question in the minds of the general examiners about any matter, the soldier was sent to the Review Board, which was made up of specialists, who had the time and opportunity to go over the patient more carefully.

This so-called Review Board varied in different camps; in some places it consisted of three members, whose principal function was to canvas the cases with reference, not so much to their physical condition, as to the degree of compensation which should be allowed for any disability present. In Camp Grant, however, the Review Board was made up of consultants, to whom the discharged men were sent for further opinion about points in question. There was a specialist in each of the following lines: cardiovascular, neuropsychiatric, genito-urinary diseases, lungs, eye, ear, nose and throat, orthopedics, general surgery, and dentistry. It will be noted that this arrangement corresponds very closely to that of the original examination of drafted men with its local and medical advisory boards, and those officers who had had such work before entering the service found it of great assistance.

After going over each referred man, the special examiner determined in what class he belonged. All cases were reviewed if there was any question about them whatever, so it is easy to see that many Class A men were sent in to the consultant, as well as those with physical defects. This was especially true in the department of orthopedics, where a hasty view would suggest trouble not found on more thorough investigation, and in eye cases, where the answers given by the men on first tests proved definitely unreliable. If a man was found to belong to Class A, he was simply so recorded and allowed to go.

There were many cases referred upon so-called E. P. E. conditions,—that is, those existing prior to enlistment; and, while there was no indication whatever to hold such, the consultants made notations of their findings on the chart form, which was in the hands of every candidate, so that, should any question arise in the future, it would be covered by this statement. It will readily be seen that from the viewpoint of disability, no compensation could be allowed for such E. P. E. conditions. As the soldiers passed into the examining-room, each man was numbered and took with him cards to hold the notations by the general board, and the chart form brought from his organization. This latter, known as Form 135-3, contained the soldier's own declaration as to his condition and a series of questions which he answered and swore to. The first was as follows: Have you any reason to believe that at the present time you are suffering from the effects of any wound, injury, or disease, or that you have any disability or impairment of health, whether or not incurred in the military service? There then follow other questions as to the nature and circumstances of possible disability. Some of the entries by the soldiers were unreliable, due largely, I believe, to a misunderstanding of the object of the chart. If a man made any statement whatever of a physical defect he was thus automatically referred to the Review Board, even though the general examiners failed to find the trouble indicated. Oftentimes on the other hand, the men refused to note very patent disabilities, fearing that such a declaration would delay their discharge.

It is difficult for one to conceive the eagerness with which the soldiers awaited their release, and in cases where slight defects had been mentioned, the men would beg to be allowed to waive any possible claims in order that they should not be held up. While, of course, the officers sympathized with the men in their desire to be discharged more keenly than it would have been tactful to show, nevertheless there were many cases which had to be held for further observation and treatment. All such fell into the so-called Class B, namely, those to be retained in service. It is understood, of course, that no man is supposed to be separated from service until he has received the maximum amount of improvement, but most of the soldiers who had claims for disability came from convalescent or hospital centers, where it was the judgment of their former officer in charge that they were ready for release. Therefore among a very large number of casualties there would be many dis-

abilities granted, and the men allowed to go immediately, since most of them would not be benefited by further treatment. Among these were the overseas casualties. These men had been for months in hospitals, both here and abroad. By the time they had reached the western cantonments for discharge every possible plastic work had been done, although now and then one ran across a man who not only needed, but desired, further attention. On occasions it was very difficult to persuade a man to spend even one extra day for such a simple matter as refraction, where not only the work was free, but the glasses were furnished by the Government.

All cases that required still further consideration and such examination as the Board could not give, for example, *x*-ray, Wassermann, etc., were placed in Class B and sent to the base hospital. This was done in order to give the subject the benefit of the most searching test under the most favorable conditions. The officers at the base hospital held a man only long enough for diagnosis and report, unless it was clearly a case for treatment or operation, under which circumstances the man remained and was returned to the Board only when the base officers felt that a recommendation for release was in order. It is well known that no venereal cases were discharged, and these were sent from the examining board to the camp venereal infirmary. The very frequent "shortarmings" that were received all through the service, as well as before final examination, made it unlikely for many cases to slip through to the Board. In fact, the first introduction to a demobilizing cantonment was a rigid examination for venereal disease. No matter what time of day or night the troops arrived they were marched to the camp venereal infirmary, and gone over thoroughly, all suspected cases being held for microscopic and other tests. This procedure naturally reduced the number coming up to the Board, but before it was adopted the office of the genito-urinary specialist was the most popular corner of the room. For instance, certain organizations of colored troops with superb physical development would have passed the Board almost without a single notation had it not been for the very frequent occurrence of gonorrhea suspects.

Although not many men were mistakenly admitted originally to the service as Class A men, these, along with limited service men, were placed in Class C, that is, those with physical defects, the Divisions 1 and 2 under C, simply varying in degree of disability. Class D contained those men who would not be fit for further service on account of physical lesions and who would have been released on such grounds had the war continued and their cases been investigated. In the latter group are such conditions as chronic suppurative otitis media, trachoma, epilepsy, etc.

After a thorough examination of every reviewed case it was the business of the consultants to determine whether there was in fact any physical disability, whether it existed prior to enlistment, whether it was incurred in line of duty, and to what extent it would affect the soldier's earning capacity. Any appreciable permanent defect is entitled to consideration if it were acquired while in line of duty; and it is not meant by that that the soldier is at work, or on duty as it were, but rather that he is under orders and under approved military discipline. For example, athletic games are not only encouraged, but required; and there have been numerous instances of serious accidents that have occurred during basket-ball or foot-ball games or boxing contests. The permanent injuries from these are considered as received in line of duty, and disabilities resulting are entitled to insurance claims. To illustrate further: if a soldier in town on a duly authorized task should be hit by a street-car and have a leg crushed, he would be granted a disability with no more question than a man who had acquired a similar wound from a high explosive at the front.

The percentage of compensation to be allowed was recommended by the special consultant on the Review Board, and was determined, not on the basis of the soldier's condition alone, but, as already said, with reference to its result on his earning capacity. There are certain instances where exactly the same lesion would be differently interpreted, for example, the loss of a finger would mean much less to a farmer than to a typewriter or a violinist, whereas a wounded leg would affect a farmer far more than it would one with a sedentary occupation. The loss of an eye might be only a 45 per cent disability or less to an ordinary laborer, but an engraver might be hampered to such an extent as to render his old occupation absolutely impossible. It is only fair also to consider the expectant aspect of certain defects. An eye might show an absolute fundus picture and give a definite amount of vision, yet one might have to estimate and in-

crease the compensation on the basis of a possible sympathetic ophthalmia. On the other hand it is easily conceivable that certain orthopedic lesions might be entitled to less consideration because they indicate plainly a tendency to marked and early improvement. To safeguard both the soldier and the Government all cases will be canvassed regularly by the War Insurance Bureau and compensation adjusted periodically as may be indicated. It may not be amiss to suggest here that almost all the officers were inclined to favor the soldier if possible, and, I think, everyone will sympathize with this attitude.

With our Board the recommendation of a specialist was not final, but he referred each case to the supervisor, who again went over it, and, if there was any question, the two considered the matter and adjusted the question.

The attitude of the average soldier was very fine. Most of them not only put in no claim, but actually seemed not to care for it, and it was often some time before men could be made to see that it was a provision of which they ought to avail themselves. To many, a claim for disability spelled delay, and everyone dreaded to spend an extra moment. At Camp Grant at the very start an order was issued that no disabilities under 10 per cent were to be considered, that a man deserved that or nothing. There were a few instances perhaps in which an acquired defect was evident, although it may not have indicated a loss of 10 per cent of earning capacity, but when there was any question the man was given the benefit of the doubt and the 10 per cent.

The granting of that 10 per cent had been a very vital thing to some of these returning boys, for the Government has arranged that in all cases with that amount of disability a vocational training will be provided. Every possible course is offered from manual and mechanical, business and commercial, to the professions,—teaching, law and medicine. Many men whose disability compensation would be insufficient to permit them to learn a new profession are thus enabled to start afresh. During the period of the early discharge of soldiers this feature was not worked out, but there is now in charge of the matter the Federal Board for Vocational Education, and great care will be taken that every man is properly looked after. In fact, after the examination by the General and Review Boards, the soldiers with any claims were sent directly to the insurance officer, who aided in adjustment and registration, and then to the vocational officer who gave advice as to the choice of a new occupation and how to proceed to secure it. The privilege of changing to another line of work is left open for some time, for, in numerous instances, even though there should be physical defects, time and experience will make possible what may seem very difficult now.

The number of men that could be put through a so-called examination mill in a day is astonishingly large, varying almost entirely with the number admitted to the camp. It was not uncommon at Camp Grant to run through two thousand in a day. During the heavy rush at the time of the return of the 33d Division, the Board was divided into a day and a night shift, running through, respectively, two thousand and one thousand men. Such a provision was scarcely necessary, nor was it fully justified, for by a proper articulation with the camp personnel department the two shifts could have worked together in the day time, and could have gotten out the same number of men. It is true that one must be prepared for an emergency, but simply now and then to turn out a large group of men a few hours earlier, it was manifestly unfair to hold indefinitely an otherwise surplus group of officers.

Officers were given much the same examination as enlisted men, although naturally less thorough, their own statements being taken on many points. A number of medical officers who had received disability in the service took advantage of the opportunity to secure a postgraduate medical course at the expense of the Government.

The United States is undertaking to provide every care for disabled soldiers and sailors. In order to show the attitude of the Government concisely it may be of interest to quote as follows from a leaflet issued by the Federal Board for Vocational Education:

> Every disabled soldier and sailor should know—
>
> That the Government is resolved to do its best to restore him to health, strength, and self-supporting activity;
>
> That until his discharge from hospital care the medical and surgical treatment necessary to restore him to health and strength is under the jurisdiction of the Military or Naval authorities;
>
> That the vocational training which may be afterwards necessary to restore his self-supporting activity is under the jurisdiction of the Federal Board for Vocational Education;
>
> That if he needs an artificial limb or other orthopedic or mechanical appliance the Bureau of War Risk Insurance supplies it free upon his discharge and renews it when considered necessary;

That if, after his discharge, he again needs medical treatments on account of his disability the Bureau of War Risk Insurance supplies it free;

That any man whose disability entitles him to compensation under the War Risk Insurance Act may be provided by the Federal Board with a course of vocational training for a new occupation;

That if his disability does prevent him from returning to employment without training and he elects to follow a course of vocational education provided by the Federal Board, the course will be furnished free of cost, and he will also be paid, as long as the training lasts, a monthly compensation equal to the sum to which he is entitled under the War Risk Insurance Act or a sum equal to the pay of his last month of active service, whichever is the greater, but in no case will a single man or a man required by his course of instruction to live apart from his dependents receive less than $65.00 per month, exclusive of the sum paid dependents; nor will a man living with his dependents receive less than $75.00 per month inclusive of the sum paid to dependents;

That if his disability does not prevent him from returning to employment without training and he elects to follow a course of vocational training provided by the Federal Board, the course will be furnished free of cost to him, and the compensation provided by the War Risk Insurance Act will be paid to him, but no allowance will be paid to his family;

That in addition to the above the family or dependents of each disabled man will receive from the Government during his period of training the same monthly allotment and allowance as that paid prior to his discharge from the Army or Navy;

That upon completion of his course of training he will continue to receive the compensation prescribed by the War Risk Insurance Act so long as his disability continues;

That in nearly every case, by following the advice and suggestions of the Federal Board, he can either get rid of the handicap caused by his disability or acquire new powers to replace any that may have been lost.

The rapid examination of a large number of men is inevitably a rather tedious procedure, but it has its compensations. There is always an interesting group of cases even if one does not see most of them until they are practically cured. When there is time to study the various phases one is repaid. The mere inspection and comparison of many subjects is of great value. Aside from the professional interest it has been worth while to come into close contact with the fine body of men comprising our enlisted personnel, to see them after their touch of the "great adventure," and to realize their feeling toward the country and the life to which they are returning.

WHAT THE UNITED STATES IS DOING FOR SICK AND WOUNDED SOLDIERS

The work of the medical men of America in the World War, at home and abroad will be commended forever by posterity; and no less will the work of our Government be praised for what it is now doing for the sick and the wounded soldier in lieu, to a large extent, of a money pension, and infinitely better. The story is a long and interesting one, and is one, we fear, that is little understood.

This work has been turned over to the United States Public Health Service, and is popularly known as the rehabilitation and vocational service, the former, of course, being done by physicians, who make all examinations for compensation and vocational training, and render such medical and surgical attention as may become necessary. The compensation work is now under the direction of the Red Cross, with headquarters in Minneapolis; the Vocational Training offices are in Minneapolis; and the Bureau of War Risk Insurance, which looks after the ailments, has headquarters in St. Paul.

The Twin Cities are the center of activity for the Tenth District, including four states,—Minnesota, North Dakota, South Dakota, and Montana. The amount of work being handled can be estimated when one considers that up to date there have been over twelve thousand disabled soldiers registered in the district for examination and treatment. All men so entitled are given, free of cost, whatever treatment, education, and vocational training may be necessary to put them back in work as useful self-supporting citizens. The staff of men who have been selected for this work have been carefully picked and most of them are ex-army surgeons.

Several of the Twin City hospitals are utilized in caring for these soldier patients in addition to many special sanitariums scattered over the field. Every member of the staff is appointed an Acting Assistant Surgeon, under Surgeon General Blue, and, if outside of the Twin Cities, he is paid upon a fee basis. The staff of the Tenth District as it now stands is divided into "Clinics," and is composed of the following physicians and surgeons, errors and omissions excepted:

THE FEDERAL BOARD FOR VOCATIONAL EDUCATION

Dr. Henry L. Williams.
Dr. S. A. Weisman.

Dr. Ralph St. J. Perry.
Dr. Morse Shapiro.
Dr. Frank H. Hacking.
Dr. Frank Lawler.
Dr. Harry S. Banks.

ST. PAUL CLINIC

Dr. H. M. Bracken.
Dr. A. R. Hall.
Dr. Wallace Cole.
Dr. Thos. McDavitt.
Dr. Charles E. Smith, Jr.
Dr. A. Morrisey.
Dr. Walter D. Brodie.
Dr. Alex. R. Colvin.
Dr. John Soper.

MINNEAPOLIS CLINIC

Dr. P. W. Wipperman.
Dr. G. A. Holm.
Dr. A. T. Mann.
Dr. S. Marx White.
Dr. Jno. S. Macnie.
Dr. J. M. Lajoie.
Dr. F. W. Wittich.
Dr. Angus Morrison.

The following physicians have been appointed examiners for their respective localities:

MINNESOTA

Dr. B. W. Kelly....Aitkin
Dr. C. E. Gates....Anoka
Dr. H. C. Otto....Frazee
Dr. E. H. Marcum....Bemidji
Dr. A. G. Liedloff....Mankato
Dr. F. W. Fanchere....Lake Crystal
Dr. A. F. Strickler....Sleepy Eye
Dr. W. A. Meierding....Springfield
Dr. F. W. S. Raiter....Cloquet
Dr. V. E. Verne....Moorhead
Dr. C. H. Patterson....Barnesville
Dr. P. C. Bjornby....Bagley
Dr. R. H. Wald....So. St. Paul
Dr. W. C. Chambers....Blue Earth
Dr. E. E. Sather....Spring Valley
Dr. C. W. Woodruff....Chatfield
Dr. G. A. Holm....Minneapolis
Dr. P. W. Wipperman....Minneapolis
Dr. J. F. X. Gendron....Grand Rapids
Dr. J. T. Ross....Lakefield
Dr. W. W. Lee....Madison
Dr. D. W. McDougal....Le Sueur
Dr. W. G. Workman....Tracy
Dr. A. E. Rumroich....Mahnomen
Dr. O. U. Meland....Warren
Dr. G. H. Luedke....Fairmont
Dr. W. P. Robertson....Litchfield
Dr. H. P. Bacon....Mille Lacs
Dr. C. C. Allen....Austin
Dr. C. F. Lewis....Austin
Dr. L. A. Williams....Slayton
Dr. J. W. Daniels....St. Peter
Dr. F. W. Manson....Worthington
Dr. J. W. Gamble....Rochester
Dr. H. A. Freeborn....Fergus Falls
Dr. B. S. Bohling....Sandstone
Dr. W. G. Daniels....Crookston
Dr. T. E. Flinn....Redwood Falls
Dr. F. M. Babcock....Northfield
Dr. F. A. Graun....Duluth
Dr. F. J. Traxler....Henderson
Dr. J. P. McDowell....St. Cloud
Dr. A. B. Stewart....Owatonna
Dr. E. T. Fitzgerald....Morris
Dr. B. V. Bates....Wheaton
Dr. D. S. Fleischauer....Wabasha
Dr. Paul Kenyon....Wadena
Dr. J. F. Lynn....Waseca
Dr. H. B. Grimes....Madelia
Dr. B. P. Rosenberry....Winona
Dr. W. W. Noth....Winona
Dr. J. J. Catlin....Buffalo

MONTANA

Dr. H. A. McMillan....Dillon
Dr. W. A. Russell....Hardin
Dr. C. W. Smith....Townsend
Dr. LeRoy Southmayd....Great Falls
Dr. J. M. Murphy....Ft. Benton
Dr. W. H. Buskirk....Miles City
Dr. Max Dorland....Anaconda
Dr. A. D. Brower....Baker
Dr. A. C. Boddle....Lewiston
Dr. E. D. O'Niell....Kalispell
Dr. R. E. Sietz....Bozeman
Dr. D. A. Baker....Jordan
Dr. R. G. Nelson....Cut Bank
Dr. J. C. Doster....Philipsburg
Dr. D. S. McKenzie....Havre
Dr. I. A. Leighton....Boulder
Dr. J. L. Treacy....Helena
Dr. Porteous Baxter....Libby
Dr. W. E. Shea....Missoula
Dr. C. T. Pigot....Roundup
Dr. P. L. Greene....Livingstone
Dr. G. W. Clay....Malta
Dr. G. F. Tigman....Valier
Dr. G. M. Crabb....Deer Lodge
Dr. A. B. Shaw....Terry
Dr. G. A. Gordon....Hamilton
Dr. H. H. Parsons....Sidney
Dr. W. A. Alexander....Forsyth
Dr. E. G. Steele....Plentywood
Dr. Harold Schwartz....Butte
Dr. D. Claiborn....Big Timber
Dr. H. T. Rhoads....Choteau
Dr. J. C. Hagen....Hysham
Dr. M. D. Hoyt....Glasgow
Dr. E. F. Ross....Harlowton
Dr. E. E. Gaines....Wibaux

NORTH DAKOTA

Dr. E. T. Green....Westhope
Dr. A. McKay....Bottineau
Dr. A. A. Whitmore....Bowman
Dr. H. A. Brandes....Bismarck
Dr. J. F. Hanna....Fargo
Dr. W. W. McQueen....Langdon
Dr. Roy Linde....Ellendale
Dr. J. A. Smith....Noonan
Dr. John Crawford....New Rockford
Dr. G. Montieth....Hazleton
Dr. Edwin L. Goss....Carrington
Dr. C. A. Dean....Grand Forks

Dr. C. L. Brimi.....Cooperstown
Dr. C. A. Kerner.....Tuttle
Dr. L. B. Greene.....Edgeley
Dr. F. K. Nolb.....Granville
Dr. B. Frankson.....Upham
Dr. E. C. Stone.....Balfour
Dr. George Coffin.....Drake
Dr. Robert Allan.....Towner
Dr. Jos. Rogers.....Alexander
Dr. R. H. Ray.....Garrison
Dr. J. B. Tyrell.....Underwood
Dr. L. G. Eastman.....Hazen
Dr. B. S. Nickerson.....Mandan
Dr. W. E. Blatherwick.....Van Hook
Dr. H. M. Waldron.....Drayton
Dr. J. E. Galbraith.....Cavalier
Dr. A. M. Call.....Rugby
Dr. G. J. McIntosh.....Devils Lake
Dr. K. O. Knudson.....Glenburn
Dr. James Halliday.....Mohall
Dr. Barnard Verret.....Rolla
Dr. John G. La Mont.....Dunseith
Dr. C. E. Howard.....Cogswell
Dr. A. P. Eatchwey.....Dickinson
Dr. A. J. Heimark.....Finley
Dr. Wm. A. Gerrish.....Jamestown
Dr. G. E. Hagenson.....Hillsboro
Dr. J. E. Countryman.....Grafton
Dr. F. E. Weed.....Park River
Dr. S. J. Hillis.....Berthold
Dr. D. A. Fisk.....Kenmare
Dr. J. R. Pence.....Minot
Dr. F. W. McManus.....Williston

South Dakota

Dr. C. V. Auld.....Plankinton
Dr. B. H. Sprague.....Huron
Dr. I. W. Leighton.....Scotland
Dr. John Duguid.....Springfield
Dr. J. W. Foster.....Aurora
Dr. B. T. Green.....Brookings
Dr. J. D. Whiteside.....Aberdeen
Dr. F. Treon.....Chamberlain
Dr. H. M. Champney.....Belle Fourche
Dr. R. P. Frink.....Wagner
Dr. E. T. Ramsey.....Clark
Dr. L. J. Brookman.....Vermillion
Dr. O. Haraldson.....Watertown
Dr. B. A. Bobb.....Mitchell
Dr. Thomas B. Smiley.....McVernon
Dr. A. E. Brown.....Webster
Dr. J. S. Bates.....Clear Lake
Dr. Thos. H. Baer.....Timber Lake
Dr. B. W. LeShier.....Armour
Dr. R. Hill.....Ipswich
Dr. F. N. Cliff.....Milbank
Dr. H. A. Murnan.....Gregory
Dr. H. R. Kenaston.....Bonesteel
Dr. Guy Ramsy.....Philip
Dr. J. E. Schwendener.....Bryant
Dr. P. McWhorter.....Miller
Dr. W. J. Maytrun.....Alexandria
Dr. A. Sherrill.....Camp Creek
Dr. T. F. Riggs.....Pierre
Dr. R. G. Paine.....Tripp
Dr. A. A. Wipf.....Freeman
Dr. G. V. Sigler.....Highmore
Dr. H. E. Jenkinson.....Wessington Springs
Dr. W. M. Hunt.....Murdo
Dr. G. V. Jameson.....De Smet
Dr. E. W. Goldman.....Madison
Dr. F. E. Clough.....Lead
Dr. H. R. Hummer.....Canton
Dr. L. Z. Fletcher.....Montrose
Dr. G. G. Kerne.....Leola
Dr. J. F. D. Cook.....Langford
Dr. F. O. Kaps.....Britton
Dr. E. W. Swafford.....Sturgis
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Dr. C. N. Harris.....Wilmot
Dr. F. S. Kidd.....Woonsocket
Dr. F. M. Baldwin.....Redfield
Dr. H. A. Gueffroy.....Frankfort
Dr. R. J. Morrisey.....Ft. Pierre
Dr. B. M. Hart.....Onida
Dr. A. P. Kimball.....Winner
Dr. E. J. Kauffman.....Marion
Dr. W. P. Bushnell.....Elk Point
Dr. A. V. Elliott.....Beresford
Dr. W. A. George.....Selby
Dr. L. F. Beall.....Irene
Dr. E. M. Morehouse.....Yankton
Dr. F. H. Creamer.....Dupre

THE
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THE CELEBRATION OF OUR FIFTIETH ANNIVERSARY POSTPONED

For some months past a proper celebration of the fiftieth anniversary of THE JOURNAL-LANCET has been under frequent consideration in this office; and the conclusion was that a brief editorial notice of the event, to be made in our issue of January 1, 1920, would be a sufficient reminder to our readers that the paper, under different names, had reached the age of a half century.

In the latter part of November we were persuaded that our decision to pass so lightly over an event of real historical interest to the medical profession in the states where the paper principally circulates, — Minnesota, North Dakota, South Dakota and Montana,—was a mistake.

Yielding at that time to the judgment of our friends, we asked a few of the old, and some of the young, men in the profession to say "a few words" appropriate to the occasion. A generous response was made, but all who wrote regretted the shortness of the notice; therefore, we decided to postpone the event.

While strongly disposed to recognize the beginning of the calendar year in which the paper was born as a suitable time for the announcement, we are glad to extend the time to June 1, 1920, June being the actual month in 1870 when the first issue of the paper was given to a very small group of pioneer physicians in the new Northwest.

We are not interested so much in laudation of the paper for what it has been or has done, as in appropriate recognition of what those men of pioneer days contributed to the profession of the Northwest today, which owes no little of its high standing to the high standards of the men of 1870 and of succeeding years.

THE SOUTHERN MINNESOTA MEDICAL ASSOCIATION MEETING

The annual meeting of the Southern Minnesota Medical Association took place in Mankato on the evening of December 1 and the day of December 2. As usual, and due to the efforts of the officials of the Association and its very active and tremendously efficient Secretary, Dr. Aaron F. Schmitt, of Mankato, the meeting was a very successful one. About four hundred attended the banquet at the Masonic Hall, and on account of the unfortunate illness of the President, Dr. John Williams, of Lake Crystal, the Secretary presided at the banquet table. The honored guests of the evening were Dr. Joseph B. DeLee, of Chicago; Dr. N. O. Ramstad, of Bismarck; and Drs. Arthur D. Dunn and W. L. Shearer, of Omaha. There were the usual music, the usual invocation, and a very comforting menu.

After the banquet festivities had practically subsided there were addresses by the various visiting men, followed by the presentation of papers. This session lasted until 1:15 A. M., and even the imperturbable stenographer, Mr. Wm. Whitford, of Chicago, did not mind the lateness of the hour. This is the way they do things in the country. They make all their plans even ahead of time, get up their program, and have it ready long before the meeting, and then carry it out to the minutest detail.

The following day sessions began at 8:00 A. M., and it must have been a new form of torture for the visiting surgeons and physicians, who were not accustomed to going to bed at two o'clock in the morning and getting up at six to attend a medical meeting, but somehow they did it.

Even though the hotels were crowded, everyone seemed to be in a very happy frame of mind, and everyone talked of the smoothness and precision with which the program was carried out. All contributors of papers, and the men who discussed these papers, were given very hearty recognition.

Some of the men were unable to come, of course, but of the number listed on the program only two were absent. Rochester, Minneapolis,

and St. Paul contributed the larger number of papers. Perhaps this is all right, but it occurs to the writer that more men in the smaller cities, other than Rochester and the Twin Cities, should be in evidence on such a program. The Secretary explains that he knows quite well what to do with this kind of business, and he appeals to the men who are accustomed to write and read papers rather than be eternally thumping some other man on the back who reads a paper once in a lifetime.

The attendance was very large, and the Secretary reported that about 350 registered. This means that there were a number of men who failed to register or to make their presence known. This is not fair to the physicians of Mankato, or those of any other city who get up an entertainment and program for medical men. Every man who attends should see that he is properly registered. This unbecoming modesty on the part of a medical man is very amusing, and it is only a little "fad" with him in thinking that by putting his name on the register-blank and paying his dues he is overstepping the bounds of propriety. One notices, however, that in matters of business he is not afraid of signing his name to a prescription, a check, or a receipted bill, yet, for some reason, he dislikes to write his name on the Secretary's books.

The next meeting of this aggressive Society will take place at Fairmont in June, when we can all motor down there in cars and go with our friends, sit round the lake, and let the men from the Twin Cities read their papers and enjoy their faint applause while we are looking at Nature, and wondering why we do not live in Fairmont, where Frank Day resides.

The officers elected for the ensuing year are named in our news columns.

DEMENTIA PRECOX

There is much confusion in the use of the term "dementia precox," and authors generally differ in the classification of mental disorders which come under this head. It is said, however, that it probably is a disease which takes more young people to institutions for mental disease than any other, and it is further stated that in New York state there are thousands of cases in hospitals. In fact, it is getting to a point, now, where almost anyone who is between the ages of sixteen and twenty-four can be easily dropped into this class, and left there as a case of precocious dementia.

It is admitted by many that it is an incurable disorder. It certainly is a condition of mental deterioration, and the pathological findings are sometimes degenerative in type. Fortunately, however, many of these people get back to their normal mental condition. They do not, perhaps, make a full recovery, but they get back to a point where they can work and care for themselves, and, not infrequently, in spite of their apprehension, fear, and instability, they are able to accept and take charge of important situations.

A large number of these cases of precox drifted into the army and naval service, some of them following an attack of acute precociousness in which the recovery was not supposed to be complete, and yet which happily ended when occupation, regulation, and environment changed the situation.

Right living makes a great difference in the development of dementia precox, for we recognize now that many of the cases coming to us are due to some toxic state, a general toxemia, a special gland toxemia, or a general change in the metabolism, either physical or mental.

There are several groups which can be looked upon as the precox type. The simple type is perhaps the most common, in which the individual, inherently uncertain, subjected to overwork, either mental or physical, and on account of his physical condition, gets out of order, as it were, and a resultant toxin is developed, which completes and produces the picture of dementia. This form of dementia precox, the simple, demented form, was looked upon for many years as the acute primary dementia of young adolescents, and out of this large number of precox cases many recovered, the infection being probably due to fatigue, instability, overwork, and the development of disorders of metabolism.

One should be extremely cautious about giving an unfavorable prognosis in the simple forms of dementia precox, as a great many of them get clinically well. Under proper care, proper diet, and with regulation of habits, they are normal, with the contribution which enforced rest brings about. Frequently in these cases we find a little higher grade or a little lower grade of dementia, in which the patient becomes noisy and extremely active both in body and mind, and then there is a sudden lull in the mental proceedings, with the development of a depressed or stuporous state. It is during the stuporous state that many of our dementia precox cases develop a catatonia, that is, a posture, which is commonly seen and frequently and most easily explained by the dementia precox type of individual.

Another class is the paranoid group, in which fixed ideas, probably inherent in character, develop after a stage of precociousness. Not infrequently these people recover to a fairly normal basis, but equally so a number go on to become permanent paranoids.

Influenza, war, and anxiety from post-war conditions, have contributed much to the development of dementia precox because of the strain and fatigue, the change in living conditions, and the anxiety which comes with these conditions.

Many of these persons suffer for many months, and then make a good recovery. Some of them lapse if their environment is not good, or if they are pushed too far, mentally or physically. When the condition of dementia precox has been fixed for a year the prognosis becomes uncertain. Such persons usually become permanently demented. But when young people are simply indifferent, shy, and negative in their conduct, they can be aroused to a certain sense of responsibility. Not infrequently, even though they seem stuporous, they have very good orientation. They understand what is expected of them, where they are, and what is being done for them, but, naturally, they are unable to control themselves to the proper degree.

The principal question is what to do with these cases, and the first consideration that should be given to cases of dementia precox is that of isolation in some place where they can be cared for with regularity and their physical condition improved. Rest is imperative, and the longer the rest the clearer the patient becomes, as a rule. Most of these people, like our influenza-fatigue psychoses, are gotten up too early. The family becomes impatient, the patient does not improve as rapidly as they think he should, and they make a change in environment and in the methods of treatment. These poor unfortunates are sent through all sorts of "healing" devices which do not heal, and which, not infrequently, either retard the recovery of the patient or contribute to his mental downfall.

The clearing out of the glandular system and the gastro-intestinal tract, and the proper feeding of the individual, are highly important; and, as most of us know, this can only be done under a physician's direction. The medication of dementia precox is of negligible importance. Rest, regulation of habits, baths, food, and the fact that the patient is left to his own mental devices sufficiently long, are the important factors. Medicines, such as glandular extracts, etc., are largely speculative as to their results.

STATE TUBERCULOSIS SANATORIUM WORK

The tuberculosis clinics being held by the physicians connected with State Tuberculosis Sanatoria in the Northwest deserve every possible assistance and encouragement our physicians can give them. Such work may benefit ten times as many people as can be treated in the sanatoria because of their limited housing facilities.

Apparently without exception the superintendents of these institutions are doing this outside work without a thought of extra compensation. If every State had enough of these institutions and directors, its tuberculosis problem might well be turned over to them; and with proper authority and sufficient funds to carry on the work, the solution of the problem, even to the abolishment of the disease, could be hoped for. What a splendid body of trained men they would make! And what enthusiasm they would manifest!

IMPORTANT NEWS ITEMS

We give in this issue two very important news items outside our news columns. They are the lists of surgeons from our territory (we call it *our* for want of a specific name) who attended the Clinical Congress of the American College of Surgeons, held in New York in October. We are able to give this complete list through the courtesy of Dr. Franklin H. Martin, Secretary-General of the College of Surgeons.

We call this an important *news* item because it shows that nearly one hundred surgeons left their work at an unusual time, i. e., just after the strenuous war days, to travel many hundred miles in order to obtain the benefit of a brief conference with other surgeons. We do not believe any other section of the country would send to such a meeting a like percentage of its surgeons under like conditions. The surgeons of this territory are seekers of knowledge.

The other list gives the names of the medical men who are aiding the Federal authorities to restore our sick and wounded soldiers of the World War to a condition of usefulness, so far as medical science and professional training can restore them. The list is important because it furnishes information which medical men can furnish their patients in need of the aid of the Government.

REPORTS OF SOCIETIES

MINNESOTA ACADEMY OF MEDICINE

November Meeting, 1919

After the usual dinner the members assembled in the grillroom of the Club for the third meeting of the year. Dr. H. B. Sweetser presided.

Three clinical cases were reported by Dr. Farr, after which the retiring president, Dr. Christison, gave his address, "The Medical Aspects of School Life, with Special Reference to Work Accomplished Among Defective Pupils."

Dr. E. L. Gardner followed with his inaugural thesis, "A Clinical Study of Basal Metabolism."

Twenty-three members and two visitors were in attendance.

Dr. R. E. Farr presented a report of several cases:

One was of a boy nine years old who was struck by the fender of an automobile and seriously hurt. The accident occurred at noon. There were no external marks of injury. The boy was dazed and unable to walk, however. Two hours later he was seen again by a physician who pronounced the injury not serious. At eight o'clock that evening he grew suddenly pale. A physician was called, and the boy was taken to the hospital immediately. Dr. Farr did not see him until eleven. The pulse was gone, the pupils dilated, and the patient gasping for air. He was apparently dying. Taken to the operating-room, he was surrounded with heat, and given 300 c.c. of blood at once, without stopping to test the donor, and 900 c.c. of normal saline was also given. Meanwhile the abdomen was opened under novocaine, and search made for the lesion. Much blood escaped from the cavity, and it was only after considerable time that the point of injury was located. It proved to be a rupture of the liver, extending into the peritoneal cavity. The wound was packed with gauze, and the abdomen rapidly closed. Before the operation was over the pulse became perceptible, and at the end was fairly strong. Two assistants and the donor remained at the hospital, and were called upon to transfuse 300 c.c. more blood during the night. Seven days later (at the time of this report) the boy was doing well.

The second case was that of a woman on whom Dr. Farr performed hysterectomy and appendectomy twelve years before. She entered the hospital early in November, complaining of great tenderness in the right side of the abdomen, which was much distended; pulse, 120; temperature, 102°; and the leucocytes, 7,200. The *x*-ray showed no free gas in the peritoneal cavity. Probable diagnosis: perforation of a typhoid ulcer. Under novocaine the abdomen was opened through a McArthur incision, and the cecal region explored. The trouble was found to be due to a heavy band of adhesions, which obstructed the ascending colon. The adhesions were divided, and the abdomen closed. Pain was entirely relieved, the bowels acted freely in a few hours, and the patient made a good recovery.

A third case was that of a man eighty-four years old, who complained of urinary retention and periodic pain in the region of the bladder. Prostatic obstruction was diagnosed and a suprapubic cystotomy performed. The bladder was found completely filled with small stones, resembling in size and shape puffed rice. There were as many as 1,200 or 1,500 of them. In fact the bladder wall was so studded with them that it was impossible to say whether they were all removed. Only the central lobe of the prostate was excised. The defect was closed over with mucous membrane and a tube left in for drainage.

F. E. Leavitt, M.D.,
Secretary.

BOOK NOTICES

The Higher Aspects of Nursing. By Gertrude Harding. 12mo of 310 pages. Philadelphia and London: W. B. Saunders Company, 1919. Cloth, $2.00 net.

'Tis the golden thread which must enter and run through the lives of all young women undertaking this noble profession; and to those determined to succeed this volume is invaluable. It is entirely new in contents, containing information of practical value, salient suggestions on deportment and conduct, and shrewd advice of all kinds touching every-day living. It emphasizes the fact that real success depends wholly and entirely upon the young woman herself. To give the profession atmosphere and quality is the author's purpose and plan.

Emma M. Knopf,
Assistant to Harley J. Gunderson, M.D.

Training School Methods for Institutional Nurses. By Charlotte A. Aikens, formerly Director of Sibley Memorial Hospital, Washington, D. C.; formerly Superintendent of Iowa Methodist Hospital, Des Moines, and of Columbia Hospital, Pittsburgh; author of "Hospital Management," "Studies in Ethics for Nurses," etc. 12mo of 337 pages. Philadelphia and London: W. B. Saunders Company, 1919. Cloth, $2.25 net.

Very little in the way of criticism and much of commendation can be said of this book. I feel that it is one of Miss Aiken's "best" and feel that every principal of nurses will find it of real value in many ways, and it should be found in every training school office.

Eleanor R. Fannie, R.N.

MISCELLANY

DR. EDWARD McLAREN DARROW

From the *Fargo Forum*

An Appreciation

The passing of Doctor E. M. Darrow occasions a loss which will be felt not alone in Fargo but throughout North Dakota.

Coming here as he did in the early days, he was identified in every way with the development of the state. He touched the life of the growing commonwealth at many angles, and at every point he was the center of a group of loyal friends and co-workers.

It is no exaggeration to say that he was the Nestor of the medical profession of North Dakota. As the leading surgeon of the state, endowed with an almost incredible faculty of intuition, backed by fine scientific judgment, Doctor Darrow held a unique position as a consultant. One of his outstanding qualities was his tactful generosity toward others of his profession who called on him for help. He was one of the members of the first board of medical examiners and many a young physician first starting in practice has had occasion to acknowledge his kindliness and encouragement.

Doctor Darrow had a rare genius for friendship. His gracious courtesy, his never failing genial humor and unfaltering fairness made him universally beloved. He had no enemies. He was so thoroughly approachable in his attitude toward others that perhaps we have not always realized how truly great a man we have had in our midst. He gave of himself freely—nothing was too much for him to do for those about him. His brilliant mind, his wonderful professional ability and keenness, his kindly gentle spirit, all combined to make him a character of unusual strength and remarkable power.

It is hard to think of Fargo without Doctor Darrow.

An Editorial

To men like Edward M. Darrow society owes a debt that cannot be paid in mere fees.

Dr. Darrow regarded his skill as a physician and surgeon, and his training, not as a mere means to a livelihood, but as a public trust. He dignified and glorified the profession he followed.

He might be regarded as a connecting link between the old fashioned "family doctor" and the modern scientific city surgeon. He was both. As a pioneer in Fargo and North Dakota, he took the keen personal interest in his patients that distinguished the old time "family doctor" of the small town. He was both physician and friend of most of his clients. Yet, Dr. Darrow was always the keen scientist, alert for new ideas and new methods, and was not content to be anything but a leader in his profession. As the city and his practice grew, he was not content merely to keep pace with them. He never lowered, but continually raised, his standards.

Probably no man in Fargo had more warm and loyal personal friends, especially among the older residents of the city. Long years of patient, faithful service, of generous giving of his time and energies to suffering humanity, of indifference to money when he felt that duty called him, of upright and honest dealings with his fellow men, gave him a following of loyal admirers and true friends such as few men enjoy.

Fargo will feel his loss keenly, as a neighbor, as a loyal citizen, and as a tried and trusted friend in time of need.

PREVENTION OF INJURY TO PATIENTS BY FALLING FROM WINDOWS

Dr. Moore, of Eveleth, contributed to *The Journal of the American Medical Association* an account of a very simple and effective means of giving hospital attendants notice when a delirious patient leaves his bed. It is as follows:

To the Editor: The article entitled "Fatalities in Hospitals Caused by Patients Falling From Windows (The Journal, Aug. 23, 1919, p. 604), tempts me to describe a scheme we have used in the More Hospital for a number of years to lessen the opportunities for delirious patients to escape from the hospital.

We installed a special enunciator in the main hall near the general service one. This special enunciator has a loud bell, differing in tone from the other. From this enunciator, concealed wires extend to a small copper plate in the baseboard near a corner in each room and ward. If a patient becomes delirious, his bed is rolled into the corner of the room or ward, and an electric mat about 3 by 5 feet in size is placed in front of the bed and connected by wires to the copper plate in the baseboard. Over this is placed a common rug. Any pressure, as a nurse or patient stepping on the rug, causes the bell attached to the special enunciator to ring, and is a warning to the nurses.

In a small hospital, especially, all nurses can be readily informed that there is a delirious patient in a certain room, and at the sound of the bell it is seldom necessary to go first to the enunciator to see where the call comes from. Our experience has been that the nurses are alert and respond promptly to this emergency call. I, myself, have been on the floor when the bell sounded, and have seen two or three nurses meet at the patient's bedside before he had time to leave the room. No delirious patients have escaped from the hospital or been injured.

Eveleth, Minn. C. W. More, M.D.

NEWS ITEMS

Dr. H. H. Holte, of Crookston, will spend the winter in Berkeley, Calif.

Dr. C. L. Lick, day police surgeon in St. Paul, has resigned the position.

Dr. F. W. Mullen has moved from Florence, S. D., to Sioux Falls, S. D.

Dr. Thomas T. Skogen has moved from Dell Rapids, S. D., to Flandreau, S. D.

It is reported that two deaths from "sleeping sickness" have occurred at Virginia recently.

Dr. F. J. McKenna has moved from Excelsior to Minneapolis, and has offices at 827 Nicollet Ave.

Dr. F. P. Rasmussen, of Center, N. D., will spend the winter in post-graduate work in Chicago.

Dr. R. W. Campbell, who formerly practiced at Bisbee, N. D., is now located at Blackduck, Minn.

Dr. A. M. Smith, of the Mankato Clinic, has become bacteriologist of the Minneapolis City Hospital.

Dr. G. W. Crabb, of Deer Lodge, Mont., has joined the staff of the Park Hospital of Mason City, Iowa.

Dr. O. F. Price, late major in the medical service, returned to Salem, N. D., last month to resume practice.

Dr. C. W. Jump, of Bozeman, Mont., has returned from New York where he has been doing postgraduate work.

Dr. F. N. Bjerken, who recently returned from France, has formed a partnership with Dr. P. H. Cremer at Hastings.

Dr. G. A. Barker, who practiced in Princeton, Minn., from 1887 to 1890, died in Menomonie, Wis., last month at the age of 64.

Dr. Goldie E. Zimmerman, of Sioux Falls, S. D., is doing post-graduate work at the Medical School of University of Minnesota.

Dr. J. R. Westaby has moved from Clark S. D., to Madison, S. D. Dr. H. J. Haskell takes over Dr. Westaby's practice at Clark.

Dr. D. W. Matthaei, of Carrington, N. D., is doing postgraduate work in New Orleans. Upon his return this month he will locate in Fessenden, N. D.

Dr. Everett Hartley, of Carver, who is now in army service in Poland, enlisted as a private in the medical corps, and has recently been appointed major.

Northfield has won a verdict in the district court upholding the will of the late George W. Murphy, in which he gave the city $50,000 for a hospital.

Dr. J. C. Michael, formerly of St. Paul, has resumed civil practice and has offices in the LaSalle Building, Minneapolis. His practice will be limited to nervous and mental diseases.

Dr. W. P. Baldwin, of Casselton, N. D., president of the North Dakota State Medical Association, is temporarily in Minneapolis, stopping at 210 Fifth Ave. S. E.

Dr. M. W. Roan, of Bismarck, N. D., who was injured by a fellow hunter, noted in our last issue, has gone to Chicago for special treatment of his eye in which a shot lodged.

The governor of South Dakota has appointed Dr. R. D. Alway, of Aberdeen, a member of the State Board of Health and Medical Examiners —an admirable appointment.

The next short course for nurses and social workers conducted by the Extension Division of the University of Minnesota will be attended by over one hundred young women.

Dr. W. R. P. Emerson, of Boston, met an appreciative audience in Minneapolis last month, when he lectured on malnutrition in children, and his lecture was practical and helpful.

Dr. A. A. Wohlrabe, of Mankato, who was charged with failure to stop his auto after an accident with a motorcycle, a boy being injured in the accident, was acquitted by a jury.

Dr. V. L. Oler, formerly of Baltimore, Md., has become associated with Dr. L. A. Schipfer, of Bismarck, N. D. The practice of the firm is limited to eye, ear, nose and throat work.

Dr. Joseph Moses, who has been working in the City Hospital of Minneapolis since his return from army service, has located in Northfield and become associated with Dr. Warren Wilson.

Dr. E. L. Hills, who has been practicing a short time at Killdeer, N. D., will have charge of the practice of Dr. S. G. Spear, of Bellfield, who will take an extended vacation for rest.

The Anti-Tuberculosis Committee of Minneapolis is urging employers to provide systematic periodical medical examination of their employees.

Dr. B. F. Iden has returned to Minneapolis, after an absence of two years' service in the navy. He was senior medical officer on the Steamship Virginia, and made twenty-four ocean round trips.

Dr. Henry W. Goehrs, who has long been associated with Dr. P. A. Hilbert, of Melrose, has announced his intention of locating elsewhere. Dr. Goehrs was re-elected mayor of the city at the last election.

Dr. Ignatius J. Murphy, of Minneapolis, who has been sharing a suite of rooms with C. D. Harrington, in the Donaldson building, has moved to his own newly furnished quarters in the Pillsbury building.

The conviction of a Minneapolis physician for prescribing narcotics to habitual users of such drugs, has been upheld by the State Supreme Court, and he must serve a term in the penitentiary.

Within sixty days North Dakota has lost, by death, four of her leading physicians: Dr. Martin Kranz, of Mandan; Dr. A. G. Patterson, of Lisbon; and Dr. Christian Kachelmacher and Dr. E. M. Darrow, of Fargo.

The Medical School of the University of Minnesota will limit the registration of the class of 1920-1921 to ninety students, and to eighty students for the class following. The men admitted will make a select body of students.

Drs. O. F. Melby, A. J. Paulson, H. W. Froelich, and L. F. Fisher, of Thief River Falls, have moved into a suite of new offices (twelve rooms) over the Citizens Bank, which are said to be unequalled as physicians' quarters in any small city of the state.

At the November meeting of the Minnesota Academy of Medicine, Dr. Walter Courtney, of Brainerd, who has been a member of the Academy for over twenty-five years, was transferred, upon his own request, from the associate to the honorary list.

Dr. E. W. Hayes, who left Browns Valley a year and a half ago for Saranac Lake, N. Y., is now located at Tucson, Arizona, and is associated with Drs. Metzger and Schulman, as medical director of the Tucson-Arizona Sanatorium for the tubercerlous.

Dr. James J. Barfield, of Butte, Mont., has been appointed medical director of the Minnesota Tuberculosis Sanatorium at Granite Falls. Dr. Barfield has had extensive experience in tuberculosis and sanatorium work in Massachusetts, Montana and elsewhere.

The Silver Bow Medical Society of Butte, Montana, were guests last month at a banquet given by the business men's club of that city in honor of the members of the society who were in medical war service. Butte alone gave thirteen medical men to the service.

The medical students of the Medical School of the University of Minnesota organized the Medical Six o'Clock Club last month. The Club is to promote the interests of the student body. It will meet monthly at dinner and hear a lecture by an invited speaker.

Dr. Frederick J. Patton, formerly of Duluth, who did war service in the navy, has been awarded the Cross of Chevalier of St. Maurice and Saint Lazarus by the King of Italy for his services to Italian officers and men at the Detroit Naval Training Station. Dr. Patton is now located at Bath, Maine.

The annual meeting of the Southern Minnesota Medical Association, held at Mankato on December 1 and 2, was an eminent success, and showed what an energetic medical society can do. A special train took the Twin Cities' physicians to the meeting. The meeting is further noticed in our editorial columns.

The "Soo" Railway Surgical Association held its annual meeting in Minneapolis last week with an attendance of over one hundred and a fine program. Officers for next year were elected as follows: President, Dr. E. P. Quain, Bismarck, N. D.; vice-president, Dr. E. V. Smith, Fond du Lac, Wis.; secretary-treasurer, Dr. J. H. Rishmiller, Minneapolis.

The names of the following surgeons in this territory appear on the program of the Western Surgical Association at its annual meeting, held in Kansas City on December 5 and 6: Dr. Gustav Schwyzer, Minneapolis; Dr. Harry P. Ritchie, St. Paul; Dr. E. S. Judd and Dr. C. H. Mayo, Rochester; Dr. E. P. Quain, Bismarck; Dr. T. F. Riggs, Pierre; and Dr. G. G. Cottam, Sioux Falls.

Dr. W. J. Mayo, of Rochester, accompanied by his wife and Mrs. M. H. Mellish, editor of the Mayo Clinic, will sail for South America on January 7 for a two months' trip. Our readers will recall the delightful reports Dr. Mayo gave through our columns of his annual European trips made before the World War. We shall hope for such a report of his trip to South America.

The following officers were elected at the recent annual meeting of the Southern Minnesota Medical Society: President, Dr. H. Z. Giffin, Rochester; first vice-president, Dr. Archa E. Wilcox, Minneapolis; second vice-president, Dr. W. J. Richardson, Fairmont; secretary, Dr. H. T. McGuigan, Red Wing; treasurer, Dr. G. F. Merritt, St. Peter. The mid-summer meeting will be held at Fairmont.

The Northern Normal and Industrial School of Aberdeen, S. D., has been made a Federalized School for the purpose of maintaining a department of hygiene, and the physical education of its students. Dr. John F. Adams, of Aberdeen, and Dr. Goldie Zimmerman, of Sioux Falls, have been appointed health examiners, respectively, for the young men and young women. The Government extends the school considerable financial aid.

Dr. Edward McLaren Darrow, of Fargo, N. D., died on November 25, at the age of 64, from cancer. He left three sons, two of whom are practicing physicians in Fargo and one is a medical student at Johns Hopkins. We give on another page a sketch of the life of this distinguished physician and an editorial appreciation, both from the *Fargo Forum*, a very able daily paper, and we are glad to be able to print such commendation of such a physician.

The Minnesota State Board of Health has been

censured by the State Public Examiner for contributing certain of its members to the United States Government for war service and paying their salaries while on such duty. Dr. H. M. Bracken did it, and no service ever done by him, whether life-saving or otherwise, was approved by some people. Technically wrong, of course; but why censure? Why not execute him with a rope, instead of with words?

The Sioux Falls District Medical Society held its annual banquet and election of officers in Sioux Falls on Dec. 2. The following were elected: President, Dr. Guy E. VandeMark, Sioux Falls; vice-president, Dr. E. D. Putnam, Sioux Falls: secretary-treasurer, Dr. S. A. Keller, Sioux Falls; censor, Dr. F. I. Putnam, Sioux Falls; delegate, Dr. T. E. Jones, Sioux Falls. Papers were read by Dr. E. Klaveness, of Minneapolis, and Drs. W. P. Roberts and E. E. Gage, of Sioux Falls.

NOMINEES FOR OFFICE BY THE HENNEPIN COUNTY MEDICAL SOCIETY

At its December meeting the Hennepin County Medical Society nominated the following candidates for office, following an antiquated custom, yclept *democratic,* with a small "d," that requires two or more nominees for each office to be filled:

PRESIDENT (one to be elected)
- Dr. J. Frank Corbett
- Dr. J. A. Watson
- Dr. S. M. White

VICE-PRESIDENT (one to be elected)
- Dr. Angus Morrison
- Dr. R. T. La Vake

SECOND VICE-PRESIDENT (one to be elected)
- Dr. F. L. Adair
- Dr. E. L. Gardner

EXECUTIVE COMMITTEE (two to be elected)
- Dr. Robert Williams
- Dr. J. C. Litzenberg
- Dr. A. E. Benjamin
- Dr. G. D. Haggard

CENSORS (two to be elected)
- Dr. W. E. Rochford
- Dr. A. N. Bessesen
- Dr. W. H. Aurand
- Dr. C. P. Nelson

For unexpired term of Dr. W. A. Hall, deceased (one to be elected)
- Dr. G. D. Head
- Dr. R. E. Farr

DELEGATES (four to be elected)
- Dr. F. L. Adair
- Dr. J. W. Little
- Dr. J. C. Litzenberg
- Dr. C. W. Pettit
- Dr. J. W. Bell
- Dr. Stanley Maxeiner
- Dr. E. K. Green
- Dr. F. S. Bissell
- Dr. W. H. Aurand
- Dr. R. T. La Vake
- Dr. S. H. Baxter

ALTERNATES (four to be elected)
- Dr. M. J. Lynch
- Dr. R. R. Knight
- Dr. Erling Hansen
- Dr. Hugh Wilson
- Dr. Rood Taylor
- Dr. Ralph Knight
- Dr. E. L. Gardner
- Dr. H. L. Knight

TRUSTEES (two to be elected)
- Dr. A. W. Abbott
- Dr. W. A. Jones
- Dr. F. C. Rodda
- Dr. A. T. Mann

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ARTICLES

EDITORIALS

CONTRIBUTORS

NORTHWESTERN PHYSICIANS WHO ATTENDED THE 1919 CLINICAL CONGRESS OF THE AMERICAN COLLEGE OF SURGEONS

The following physicians, from the states named, were in attendance upon the annual meeting of the Clinical Congress of the American College of Surgeons, held in New York on October 20-24, 1919.

The list is a long one, indeed, a very long one when it is considered that most of the men named were only recently in war service.

The Twin Cities, as well as the more distant cities of the Dakotas and Montana, have reason to be proud of the men who attend such meetings.

Minnesota

Dr. Stephen H. Baxter....Minneapolis
Dr. Arthur E. Benjamin....Minneapolis
Dr. George E. Benson....Minneapolis
Dr. Albert E. Booth....Minneapolis
Dr. J. G. Ericson....Minneapolis
Dr. Robert Emmett Farr....Minneapolis
Dr. Earle R. Hare....Minneapolis
Dr. J. H. Higgins....Minneapolis
Dr. James A. Johnson....Minneapolis
Dr. J. C. Litzenberg....Minneapolis
Dr. Daniel A. MacDonald....Minneapolis
Dr. John S. Macnie....Minneapolis
Dr. Arthur T. Mann....Minneapolis
Dr. Horace Newhart....Minneapolis
Dr. O. A. Olson....Minneapolis
Dr. Frederick H. Poppe....Minneapolis
Dr. C. J. Ringnell....Minneapolis
Dr. John H. Rishmiller....Minneapolis
Dr. C. M. Roan....Minneapolis
Dr. Samuel C. Schmitt....Minneapolis
Dr. Ivar Sivertsen....Minneapolis
Dr. Charles N. Spratt....Minneapolis
Dr. A. C. Strachauer....Minneapolis
Dr. Eugene S. Strout....Minneapolis
Dr. H. B. Sweetser....Minneapolis
Dr. J. A. Watson....Minneapolis
Dr. A. G. Wethall....Minneapolis
Dr. C. A. Witham....Minneapolis
Dr. Franklin R. Wright....Minneapolis
Dr. L. C. Bacon....St. Paul
Dr. Henry Ernest Binger....St. Paul
Dr. Frank E. Burch....St. Paul
Dr. Robert Earl....St. Paul
Dr. A. C. Heath....St. Paul
Dr. T. J. Plondke....St. Paul
Dr. A. Schwyzer....St. Paul
Dr. A. W. Adson....Rochester
Dr. Carl A. Hedblom....Rochester
Dr. Melvin S. Henderson....Rochester
Dr. Charles H. Mayo....Rochester
Dr. W. J. Mayo....Rochester
Dr. George F. Murphy....Rochester
Dr. Aaron Franklin Schmitt....Mankato
Dr. Alphonse E. J. Sohmer....Mankato
Dr. W. A. Coventry....Duluth
Dr. B. S. Adams....Hibbing
Dr. A. C. Baker....Fergus Falls
Dr. Warren L. Beebe....St. Cloud
Dr. B. J. Branton....Willmer
Dr. Theodor Bratrud....Warren
Dr. W. E. Browning....Caledonia
Dr. Henry C. Cooney....Princeton
Dr. William H. Daniels....Crookston
Dr. Karl A. Danielson....Litchfield
Dr. Rowland Gilmore....Bemidji
Dr. E. W. Humphrey....Moorhead
Dr. Laura A. Lane....Faribault
Dr. Charles F. Lewis....Austin
Dr. Edward H. McIntyre....Virginia
Dr. O. F. Mellby....Thief River Falls
Dr. C. W. More....Eveleth
Dr. Owen W. Parker....Ely
Dr. Ora C. Strickler....New Ulm

Montana

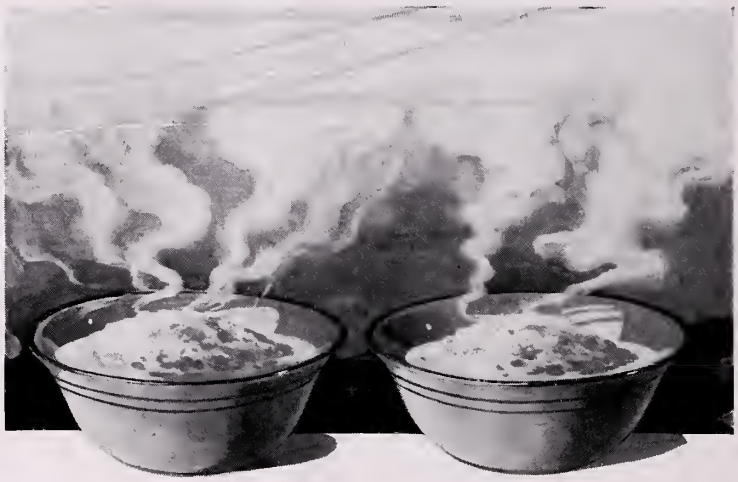
Dr. Frederick Franklin Attix....Lewistown
Dr. J. Theodore Brice....Lewistown
Dr. W. H. Buskirk....Miles City
Dr. George M. Crabb....Deer Lodge
Dr. H. E. Houston....Kalispell
Dr. Clyde W. Jump....Bozeman

North Dakota

Dr. Jesse W. Bowen....Dickinson
Dr. Paul H. Burton....Fargo
Dr. V. J. LaRose....Bismarck
Dr. H. W. F. Law....Grand Forks
Dr. Archibald D. McCannel....Minot
Dr. E. P. Quain....Bismarck
Dr. N. O. Ramstad....Bismarck
Dr. Martin W. Roan....Bismarck

South Dakota

Dr. Alfred G. Allen....Deadwood
Dr. R. D. Alway....Aberdeen
Dr. C. S. Bobb....Mitchell
Dr. E. O. Giere....Watertown
Dr. B. T. Green....Brookings
Dr. M. M. Grove....Dell Rapids
Dr. F. W. Minty....Rapid City
Dr. Robert L. Murdy....Aberdeen
Dr. Frederick A. Spafford....Flandreau
Dr. B. H. Sprague....Huron



A Big Dish One Cent

A dish of Quaker Oats costs one cent.

That's the cost of a bite of meat, or one-quarter of an egg.

Quaker Oats cost 5½ cents per 1,000 calories.

Meats, eggs and fish will average 9 or 10 times that.

Quaker Oats is almost the ideal food in balance and completeness, it is 16 per cent protein and is rich in needed minerals.

It is a whole-grain food.

Measured by calories, it is twice as nutritious as round steak.

Quaker Oats breakfasts mean lower food cost and that people are better fed.

Quaker Oats

The delicious flavor is due to using queen grains only. We flake only the richest, plumpest oats for this brand, and we get but ten pounds from a bushel.

This extra flavor means added delights without any extra cost.

The Quaker Oats Company

Chicago

3222

PUBLISHER'S DEPARTMENT

PNEUMOTHYSINE

Pneumothysine is an antipyretic, analgesic, and antiseptic preparation for external application in all cases needing a drug of the properties named. The principal symptoms indicating its use are congestion, inflammation and pain.

The formula of Pneumothysine is put upon each package, and tells intelligent physicians when to use it and what results to expect.

The results obtained from it are prompt and satisfactory.

It is manufactured by the Pneumo-Phthysine Chemical Co., of Chicago.

SHARP & DOHME

The evils of substitution by the druggist or by the manufacturer and of careless methods by careless or incompetent, possibly dishonest, manufacturers, can hardly be estimated. They have had no small part in the creation of the too prevalent sentiment of drug nihilism and therapeutic indifference in the medical profession.

There is but one remedy, namely, patronage of only absolutely dependable manufacturers, such, for instance, as those who frankly said during the late war: "We cannot obtain such and such drugs, and we will no longer make pharmaceuticals of which they are a part." This takes courage—such courage as is based upon long-continued and ingrained honest dealings.

Such a house is that of Sharp & Dohme, of New York, which was founded on this principle in 1860.

THE MEDICAL PROTECTIVE COMPANY OF FORT WAYNE

Protective insurance for physicians and surgeons was never so necessary as today, for, in spite of all precautions of every character, medical men are in constant danger of malpractice damage suits; and the cost of such suits, both in the form of the expense of defending them and in the form of an unexpected and unrighteous verdict, is too great not to be insured against.

The Fort Wayne Company does two things for the physician: it wins the suit brought against him in almost every case and it pays all the expenses; of the two benefits the former is by far the greater.

The Fort Wayne Company writes the right kind of insurance, gives the right kind of guarantee, and it fights to win a verdict that exonerates its clients.

THE WESTERN CHEMICAL COMPANY

If any of our readers do not know of the work the Western Chemical Company of Hutchinson, Minn., is doing in the way of putting up in palatable form the leading pharmaceuticals, such reader will have a pleasant surprise if he will permit the Company to send him some samples.

And if any do not know of Iodothal then they have missed a really ideal preparation of iodine, which is far

superior to most, if not all, iodine preparations in the market.

Just tell the Company on a postal card or your letterhead that you are interested in new and excellent things, and, if necessary, you may add the word "ethical" things.

The Company will soon be located in Minneapolis, where it will build a factory and enlarge its facilities and its list of standard pharmaceuticals.

RIVER PINES SANATORIUM

Over at Stevens Point, Wisconsin, is a private institution for the care and treatment of tuberculous patients that has long commended itself to discriminating physicians. It is just large enough to provide for the best professional talent, and it is not too large to give the proper care to every patient.

In location and environment, in building equipment, and the personnel of staff are to be found the reasons for its uniform success.

Its medical director, Dr. John W. Coon, invites physicians to inspect the sanatorium or to seek through him any information, however general or specific, they may desire.

QUAKER OATS

Everybody knows that oatmeal has been used more in Scotland than in any other country, that is to say, it has been used the most by the sturdiest, brainiest, and healthiest people in the world. It has all the qualities on an almost ideal food, especially when eaten with milk or cream. It is a delicious food of which the child or the adult never tires; and measured by the cost per 1,000 calories, it is probably the cheapest of all foods.

And the best oatmeal ever put upon the market is called Quaker Oats for identification. Quaker Oats is the perfect oatmeal, with the best flavor and the best of the grain, and with no part of the grain not good for the human system.

USED *X*-RAY AND ELECTRO-THERAPEUTIC APPARATUS FOR SALE

The Victor Electric Corporation announces, on another page, a lot of used apparatus that will, no doubt, meet the needs of many physicians quite as well as new apparatus.

All such apparatus sold by the Victor Corporation may be depended upon and will be just as represented.

Such opportunities to obtain high-grade apparatus at low prices do not often come to one, especially with the guarantee that the apparatus is just as represented.

For full information address the Victor Electric Corporation, Minneapolis.

A NEW *X*-RAY LABORATORY

The Physicians' and Dentists' *x*-Ray Laboratory, recently organized in Minneapolis, sends its Christmas greetings to the medical and dental professions of the

Northwest, and will make further announcement of its work in our next issue.

Its director, Mr. J. A. Errett, has had several years' experience in exclusive *x*-ray work, two years of which were spent in the army at Fort Riley, the amount of work done being limited only by the physical capacity of the operator.

Look for the Laboratory's card in our next and subsequent issues.

THE RIGGS OPTICAL COMPANY

The opthalmologists of the Northwest are offered an extraordinary prescription service by the above-named company through its stores in twelve cities, namely, Fargo, Sioux Falls, Helena, Sioux City, Omaha, Lincoln, Cedar Rapids, Quincy, Portland, Spokane, Seattle, and Tacoma.

The purpose of the company is an unerring interpretation of the ophthalmologist's prescription, to fill it only with wares of quality, and to make delivery of anything ordered on time.

Such service means the increased success of the ophthalmologist because of satisfied patients.

The optical company that will give such service has a great opportunity for continued and ever-growing usefulness.

For full details address the Riggs Optical Company in any of the cities named above.

AN OLD FRIEND IN A NEW FORM

The physician who has been accustomed to prescribe that well-known and dependable hematinic and tonic, Gude's Pepto-Mangan, will, no doubt, be pleased to learn that it is now available in *tablet* form. The active medicinal ingredients are identical with those of the liquid form, each two tablets being equivalent in medicinal activity to one tablespoonful Pepto-Mangan, liquid. The new tablet form of the preparation is by no means intended to supplant or displace the fluid, but rather to supplement it by furnishing this standard blood tonic in a form especially convenient for travelers, teachers, business men and women, and those who find it convenient to carry the liquid from place to place. Pepto-Mangan, in tablet form, is marketed in bottles containing sixty tablets, the contents of each bottle being equivalent in dosage to one bottle of Pepto-Mangan, liquid. We are confident that the physician will approve of and take advantage of this old friend in a new form.

JORDAN SULPHUR SPRINGS AND MUD BATH SANITARIUM

For some reason, never explained, such institutions as the above have been looked upon by the public and by too many physicians as summer resorts for "ailing" people. As a matter of fact, many sick people need them more in winter than in summer. The Jordan Sanitarium is especially equipped to care for patients in the winter.

The work of this institution is so well known, and the results obtained in all cases properly referred to it are such that the physician who refers his obstinate cases that are beyond the help of ordinary medication and need the elimination that the sulphur mud bath will

give, will find such patients exceedingly grateful for either the temporary or permanent help they get.

The Jordan Sanitarium is only about an hour's ride from the Twin Cities on two railway lines, and is thus very accessible. It is located at Jordan, Minn.

CONSULTATION WORK EXCLUSIVELY

What the medical men of the Northwest have desired for a long time is now at their disposal—a consultative laboratory.

Dr. Ignatius J. Murphy, the director of the laboratory, is well known throughout the Northwest. His medical training has been long and thorough. He enjoyed a large general city practice for several years. At the outbreak of the war by unanimous choice of the Board of Directors of the Minnesota Public Health Association, Dr. Murphy was drafted from his postgraduate course to carry on the work started by Dr. H. W. Hill, who was given leave of absence to join the Canadian forces. While doing State work Dr. Murphy learned from personal contact with general practitioners just how difficult their problems are. He helped many communities organize hospitals, tuberculosis dispensaries, and nutritional clinics, and read numerous papers at National, State, and County medical meetings.

Dr. Murphy spent the past year doing postgraduate work with the foremost internists of New York and Boston. The medical profession is invited to patronize the consultative service and to visit the laboratories located on the eighth floor of the Pillsbury Building.

"THIS SPLENDID GIFT"

The Northern States Power Company, of Minneapolis, is selling its 7% preferred stock, concerning which information has already been given in these columns.

We have two interesting and, indeed, valuable personal points concerning this stock:

1. A member of our staff is closing up an estate as administrator. He found in the assets of the estate several shares of the preferred stock of this company. Quarterly dividends had been paid regularly upon the stock; and upon presentation of the stock at the Company's office the market price was paid for it, and this price was slightly above the price originally paid for it.

2. The same experience was related by a friend, who, as administrator, was just closing an eastern estate.

A 7 per cent stock with a cash market price today equal to or above its cost, if purchased three or four years ago, commends itself.

PROPHYLAXIS AND TREATMENT OF INFLUENZA AND INFLUENZAL PNEUMONIA

Dr. E. C. Rosenow, of the Mayo Clinic, has probably done more to determine the prophylactic value of vaccines in influenza than any other individual in the country. He reported on the use of a prophylactic vaccine last winter. There were 100,000 cases under observation, with 300,000 controls. He declared that the incidence of influenza was about three times as common and the death-rate five times as high among the uninoculated as among the vaccinated persons.

Parke, Davis & Company's Influenza-Pneumonia Vaccine is prepared essentially in accordance with the original formula and method of Dr. Rosenow. It is administered in three injections, at intervals of six or seven days.

What about the treatment of influenza and influenzal pneumonia?

Physicans who employed Pneumonia Phylacogen last winter with the most striking results gave an initial injection of 16 minims immediately to every patient who came down with influenza. The second day the dose was increased to 32 minims, the third day to 48 minims, and so on until convalescence was established.

When pneumonia had already developed, 16 minims of Pneumonia Phylacogen was administered immediately. Twelve hours later 32 minims was injected, and the dose was gradually increased every twelve hours until the critical period had been passed.

Parke, Davis & Company, Detroit, will be pleased to send a copy of a new booklet, "Prophylaxis and Treatment of Influenza and Influenzal Pneumonia," to any physican requesting it.

PNEUMOCOCCUS ANTIGEN

More than ten years ago, Dr. E. C. Rosenow, of the Mayo Foundation, showed that the autolytic extract of highly virulent pneumococci contained an anti-opsonic substance, which could be separated from the antigenic substances in the protoplasm of the organisms. Their gross experimental characteristics were quite distinctive; the toxic or non-antigenic substances, when injected caused marked local reaction, leucocytosis, and fever; the non-toxic or antigenic portion when injected produced no reaction to speak of, no fever nor leucocytosis. Serologically also, the distinction was found to be wide; the toxic substances had practically no effect on the opsonic index, did not confer immunity after repeated injections, and proved fatal to animals injected intravenously; on the other hand, injection of the non-toxic substance was followed by a marked rise in the opsonic index, and by immunity. Furthermore, these substances were shown by the immunity curve to be antagonistic in simultaneous injection.

Dr. Rosenow began immediately the study of the problem and carried it on both from the laboratory and clinical standpoint. Data have been collected from hundreds of clinical applications of *Pneumococcus Antigen* indicating its value. In a series of 200 cases, ranging in age from five to fifty-eight years, in which diagnosis was made by clinical history, physical findings, cultures, etc., the mortality was only 7 per cent.

Pneumococcus Antigen (V 903) is made by Eli Lilly & Company according to the method of Dr. Rosenow. The results obtained by Dr. Rosenow and his co-workers were duplicated by many physicians in their private practice during the fall and winter of last year. There is no doubt that the opportunities for the further use of the antigen will definitely establish it as a valuable aid in combating this dreaded infection.

ESTABLISHED AS THE NORTHWESTERN LANCET IN 1870

THE JOURNAL-LANCET

Represents the Medical Profession of

Minnesota, North Dakota, South Dakota, and Montana

The Official Journal of the

North Dakota and South Dakota State Medical Associations

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Vol. XXXIX, No. 1

MINNEAPOLIS, JANUARY 1, 1919

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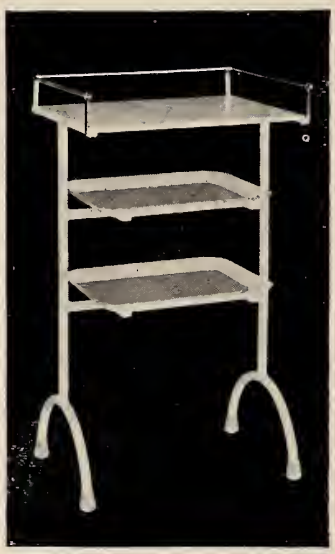

The Handy Table

The Handy Table pleases all of our customers—all of the time.

Manufactured in our own factory.

Baked white enamel, two removable trays, whole frame made of one piece.

The best physician's table ever designed.

Lake St. and Colfax Ave. **Standard Medical Supply Co.** Minneapolis, Minn.

The Influenza Menace

INFLUENZA (with its sequela of pneumonia) is said to have caused more deaths than occurred in the American army in France. It is still widely prevalent. Fresh outbreaks are reported in many places where the epidemic was thought to have subsided. Danger lurks everywhere.

The situation demands that every possible precaution be observed.

Prophylactic vaccination is the rational procedure. In one locality, where several thousand persons were vaccinated before the appearance of symptoms, not a single death occurred.

Influenza-Pneumonia Vaccine
(Prophylactic)

This vaccine, the formula of which was suggested by Dr. Rosenow, is offered to the medical profession with confidence in its efficacy as an immunizing agent. It is composed of cultures newly isolated from cases occurring during the prevailing epidemic. Each mil (Cc.) contains five billion bacteria, in these proportions:

Diplococcus pneumoniæ, type I	500 millions
Diplococcus pneumoniæ, type II	750 millions
Diplococcus pneumoniæ, type III	500 millions
Diplococcus pneumoniæ, type IV	1250 millions
Streptococcus hemolyticus	1000 millions
Bacterium influenzæ (Pfeiffer)	500 millions
Staphylococcus pyogenes aureus	500 millions

Used only as a prophylactic of influenza and the pneumonia that sometimes follows.

Initial dose, ½ mil; second dose, 1 mil; third dose, 1½ mils—at intervals of seven days.

20-mil bottles; price (list)	$3.50
5-mil bulbs; " "	1.00

Parke, Davis & Company

Home Offices and Laboratories, Detroit, Michigan.