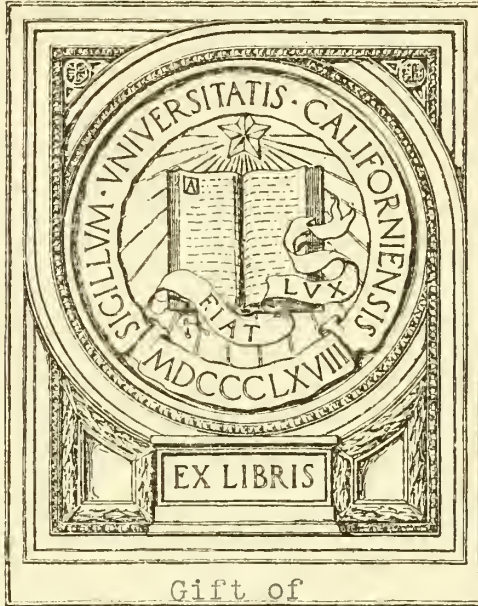




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**NEW ORLEANS**  
**MEDICAL AND SURGICAL**  
**JOURNAL**

**Volume Seventy-Seven**

**JULY, 1924**

**TO**

**JUNE, 1925**

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**NEW ORLEANS**  
**AMERICAN PRINTING COMPANY, Ltd.**



535-7 Poydras Street





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JUL 24 1924

# NEW ORLEANS MEDICAL AND SURGICAL JOURNAL

**Owned and Published by THE LOUISIANA STATE MEDICAL SOCIETY**

**OFFICIAL ORGAN MISSISSIPPI STATE MEDICAL ASSOCIATION AND ORLEANS PARISH MEDICAL SOCIETY**

\$2.00 per Annum, 25c per Copy  
Volume 77, Number 1

JULY, 1924

Published Monthly in New Orleans  
at 1551 Canal Street

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**Next Annual Meeting Mississippi State Medical Association, Biloxi, May 12-14, 1925**  
**Next Annual Meeting Southern Medical Association, New Orleans, Nov. 24-27, 1924**

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# New Orleans Medical

and

# Surgical Journal

Vol. 77

JULY, 1924

No. 1

## EXPERIENCES MET WITH IN THE PRACTICE IN CENTRAL AFRICA.\*

ROBT. R. KING, M.D.,  
MUTOTO, CONGO BELGE, AFRICA.

This paper is offered, not with the intention of bringing to you anything new in the field of medicine, but rather with the hope of giving a clearer idea of the work being done by members of the medical profession on foreign mission staffs.

The work of the medical missionary is undertaken primarily to aid in the evangelization of the heathen, and the healing of the sick is a means towards an end. But except for the men in medical centers such as this, he comes into contact with a far greater number and variety of cases than the rest of the profession.

The first problem that confronts him upon arriving on his field is the learning of a new language, and in some districts more than one. In the Belgian Congo, where my work lies, the Buluba language is spoken over a large section of the country, so one may travel for days under present conditions without passing the bounds of this tongue. The Buluba people belong to the great Bantu family which occupies, roughly speaking, all of Africa south of the 5th northern parallel with the exception of a small area along the west coast and the Hottentot territory in the extreme south. The dialects of this family differ as much as do European languages of the same family group.

The construction of Buluba differs from our own language in many respects. The nouns are divided into eight

classes, each with its own singular and plural prefix, and the verbs, adjectives and possessives are modified by the noun which they accompany. Having mastered a working knowledge, one's difficulties are not over, for while the language is quite rich in some respects, in others it has a remarkable paucity of terms. Three colors only are expressed, black, white and red. Green, the most prevalent color in the tropics goes unnamed. Anatomical designations are more in the nature of generalizations and sometimes a part will have a new name in each clan visited. The liver is regarded as the seat of affections and the heart is spoken of as "the fruit life." Another expression that we search for in vain is a common one for an evacuation of the bowels.

Our particular section of the Belgian Congo is known as the Upper Kasai Region, taking its name from the Kasai River, which is one of the largest tributaries of the Congo. We are in some 1,200 miles from the coast, 6 d., S. 23 d. E., and have an average elevation of 2,000 feet. This elevation, together with an almost constant breeze, gives us a very moderate climate for the tropics. The noon-day temperature on my veranda is usually around 78° Fahr., the thermometer being under a thick thatch roof and some 10 feet back from the roof edge.

The native house, usually consisting of a single room about 10 feet square on the outside, is constructed of sticks and mud, with a grass or palm-leaf roof. These houses have a single entrance and no windows, and in them live the family, goats, dogs, ducks, chickens and even boarders at times. A fire is kept burning throughout the night for the double purpose of warmth and protection from

\*Read before the Orleans Parish Medical Society, April 28th, 1924.

wild animals. The African's life is filled with superstition, and one meets with it everywhere. Approaching a native village, one sees broken pots, knotted grass, white lines and other snares for the evil spirits in the hope that they may be discouraged from entering. Death is never conceded to be from natural causes, and revenge is usually sought against those suspected. It is a common thing to see the natives rushing up and down their villages upon the approach of a storm, brandishing spears and knives and screaming at the tops of their voices in the hope of frightening off the lightning which they think is the form some man has taken in order to kill an enemy. Just a short time before returning home I entered a village and was told that a boy had just died who had come in from the plain all cut up. A man had lost his child from some fever in another village and when the child died the father started out with his knife and meeting this boy on the plain, killed him to avenge the death in his own family, though he had never seen the boy before as far as he knew. The outcome of this was that the family of the murderer paid to the chief of the boy, a woman and child to replace the life that had been taken.

When a woman is confined she is attended by any old women of her clan who may have passed the child-bearing period. For one not past this age to assist would mean that she would never again bear a child. There is no attempt to conceal pregnancy, and it could not well be done with the amount of clothing worn, but rather it is considered more in the nature of a compliment to ask a woman if she is in that state. No native man is allowed to come near the place of confinement, and if he does he is considered responsible for the death of the child should it occur. The woman is often taken into the forest or the high grass of the plains when her time has arrived and delivers there without any sign of a mat or other protection under her. I once had to do an internal version in such a place, and if you are looking for a back-breaking piece of work I can recommend this to you.

In a normal case the usual method of procedure is for one old woman to sit down against a wall and the patient sits on the ground leaning back on the other

woman and supporting herself on the flexed knees of her helper. If matters move too slowly another woman will sit facing the patient and without ever having washed her feet, she inverts her great toes into the vagina and everts them in the hope of enlarging the outlet. I have never known them to introduce a hand or to make pressure on the abdomen, but beating them over the head and many other remedies are used. When the child is born the cord is divided, not with a sharp instrument, but by rubbing between two sticks, the cord being cut some inches from the umbilicus and no ligature applied. As umbilical hernias are considered more ornamental than otherwise, traction on the stump of the cord is the rule. But in spite of these customs there is a surprisingly small number of infections, the worst of these that I remember having seen was in a woman who had been in labor for 6 days when she was brought in to the hospital, and who died a few hours after delivery. At the time of admittance I thought that I had a case of hourglass contraction. A catheter could not be introduced into the bladder, but as soon as the head was delivered there was no need of the catheter or further doubt as to the trouble. In the beginning of my work out there I was called in only when there were complications, but now the calls for the normal cases come quite frequently as well. Hard labor is considered evidence of unfaithfulness on the part of the woman towards her husband.

Should a mother die when the baby is young an attempt is made to sustain the life of the child on the milk of green corn, or with corn meal gruel. Goats are all about them, but they do not use the milk. No other woman will nurse the baby as they think that doing so will cause the death of their own child. When all goes well, the attendants, hearing the infant's cries, decide that it is hungry, and sometimes within a few hours, and always within 48 hours, they begin to feed the baby the same food that they most commonly eat, a stiff mush made from the root of the cassava, from which we get tapioca, with a small addition of corn-meal. This mixture is pushed down the baby's throat just as one stuffs a goose, and they do not stop the practice after the milk flow is estab-

lished, but continue it until the baby is old enough to feed itself if it is fortunate enough to live so long.

As you know, statistics are difficult to get, even here, so that in a country such as the Congo they are practically unobtainable. However, one man did try to keep records of the babies near him and his estimate was that 75 per cent of them died in infancy. Certainly, according to government figures the population is decreasing and the heavy infant mortality is responsible for a good proportion of it.

Living in the dirt as they do, it is not strange that helminths are quite prevalent. The most common ones are the ankylostoma, ascaris lumbricoides, oxyuris vermicularis and schistosomum mansoni. My own records show a percentage of infection of between 85 per cent and 90 per cent, while the lowest estimate I have seen made was 60 per cent, and this was from a distant part of the colony. Our soil is a sandy one and the native does not have privies, so our greatest trouble is re-infection.

The skin comes in for its full quota of troubles and we have everything from scabies to leprosy to deal with. In treating the skin we probably get fuller cooperation from the native than in any other condition. They are great believers in external application, and many of the prescriptions given for oral administration find a different use in the natives' hands. It is a fertile field for Sloan and Tichenor as soon as money is in more general circulation.

Accidents are less frequent among these people than they would be in a like sized population among us. This is largely due to the native customs. Should one draw blood from another he is liable for damages, no matter how trivial the wound or how unintentionally inflicted. If one boy invites another to go swimming with him and the invited boy is carried off by a crocodile or drowned, the first boy is responsible for his death. Such laws as these make the natives think of safety first, and so they never toss a tool from one to the other, but cause many delays in building operations by insisting on passing materials from hand to hand.

Of fractures we do have some, usually among the men who are working or hunting in the forest. The natives

treatment of these injuries differs with his tribe. Most of them apply flexible splints made by tying narrow strips parallel to each other, and then binding this around the injured part without any attempt to adjust the broken bone. One of the tribes whose members climb by walking up the trees with the aid of a band passing around it, have more falls than the others and have another method of treatment for fractures of the lower extremity. Instead of moving the man, they dig the trench and extend the leg in it and cover it over with dirt. Then they build a shelter over him and nurse him on the spot.

Another method of some interest is their use of heat in such conditions as injuries to the back. In these cases they dig a trench and bury the patient with the exception of his head, having the back uppermost with several inches of dirt covering it, and then make a fire over the part under treatment. I once had a man with a perineal abscess who would not agree to having it opened with a knife. He called in a native friend who treated him by digging a small furnace in the ground, leaving an opening of some two inches in diameter. He would make his fire and then have the victim squat over the vent with a blanket wrapped around him. After five or six days the abscess opened and the patient was well pleased with the treatment.

Circumcision is universally practiced among them. It is said that should a woman marry a man on whom this rite had not been performed she would leave him. However, I have never yet seen one who had not had the operation. It is done when the boy is from 7 to 12 years old by some specialist who usually goes about over the country plying his trade. The patient requests some of his friends to go with him and their job is to hold him while the operator makes traction on the foreskin and saws it off. The dressing consists of a hoop suspended from the waist, over which the cloth is draped if the boy is wearing one.

The average native when sick is willing for any operative procedure other than operations on the eye and amputations. Troubles such as Madura foot they prefer to carry with them to their graves. The prevalence of trypanosomiasis varies with the topography of

the country, and in our district the infection is not heavy, it seldom occurs that I have more than six cases under treatment at one time. So far I have not had an opportunity to use either the Bayer 205 or tryparsemid, but from the reports on these two remedies we can look forward to a better day in our treatment.

Probably 90 per cent of our cases would be the same as those that are met with here, the other 10 per cent falling under the tropical classification. Disturbances of the alimentary canal easily lead the list, and when their diet is taken into consideration it is not to be wondered at, for it includes anything in the meat line with the exception of parrots, because they learn to talk; toads, because they give scabies, and lizards, because they give scabies, and lizards, for a reason with which I am not familiar. The cause of death of the animal does not disturb the native, and the only way to prevent the eating of the animals dying in our yard is to burn them. The larger grass-hoppers, some varieties of caterpillars, ants and other insects are partaken of with relish.

One of the professors of the polyclinic advises against the giving of high enemas by use of the colon tube. He might like to adopt the Kaisai technique, which is as follows: Take a small gourd, cut off the tip of the stem and the opposite end. Introduce the stem into the rectum and pour the liquid into the cup. When the flow is too slow get down and blow the liquid through.

Our local village has a population of only 1,000, but our material is drawn from any other villages within a few hours' travel. The average morning clinic attendance is 50. Besides this, we have a weekly baby clinic with an average attendance of 56, and many local calls.

Roughly speaking, I am responsible for a territory extending to the north of me for 100 miles, to the east 150 miles, to the south for an unknown distance and to the west 40 miles. The natives usually come to me except in the case of a severe epidemic, but calls from the white people over this area are answered by the use of motorcycles, and I am expected to do anything from the filling of a tooth to the delivery of a baby.

Our present staff consists of four

physicians and eight nurses, occupying five stations, these stations being an average distance of 100 miles apart. Furloughs reduce the number on the field at any one time by about 25 per cent.

To sum it all up, there is more work than we can do. The education of these people to a better standard of living is necessarily slow, but progress is being made. Native assistants are being trained and in time we expect to place these workers out in populous centers to handle the more simple treatments, the more difficult ones to be referred to the physician supervising.

#### DISCUSSION.

Dr. P. B. McCutcheon:

I wish to ask Dr. King to tell us something about the pygmies in Central Africa and the hospital at Sapele, S. Nigeria, West Africa. In 1904 it was my good fortune to meet Rev. S. P. Verner of Brevard, North Carolina, Presbyterian Missionary to Africa and a special agent of the Anthropological Department of the World's Fair and Louisiana Purchase Exposition, St. Louis, Missouri, 1904.

Mr. Verner arrived in New Orleans, June 25th, 1904, with 2 African boys and 4 pygmies from Wissmann Falls region, Kongo River, Kongo Free States, Central Africa on his way to the World's Fair, St. Louis.

Mr. Verner was sick with malarial fever and I treated him. After recovering he went home, Brevard, N. C., and remained until July 26th. He then went to the Exposition taking his pygmies and the African boys with him. He passed through New Orleans in December, 1904, bringing his pygmies with him, as his contract required him to return them to their families in Africa. He left here for Africa via Havana, Cuba. I have not heard from him since.

Mr. Verner gave me a souvenir. This war hatchet. It is made by hand, the iron is twisted; on one side is the face of a man cut out when the iron was hot.

This photograph of the pygmies, with their names and tribes gives you an idea of their appearance and size—(average height, 4 feet, 8 inches.)

I think it a most remarkable coincidence that 6 years later, May 10th, 1910, I received this photograph of a hospital at Sapele, S. Nigeria, West Africa. I suppose these two men were here with Mr. Verner. They wrote this card—"Please accept my best wishes and regards. Native Hospital." but they neglected to sign their names.

One is supposed to be Otabenga pygmy, son of the chief of the Chi Chiri Tribe. He was in the hands of the cannibalistic tribe of the Baschilde. He was to be chief of the feast, when Mr. Verner rescued him by paying a price in calico and beads, and

Otabenga became his willing servant. He was seventeen years old and had been married twice. His first wife was eaten by cannibals. His second wife died from the effects of a snake bite. Now he is a doctor (M. D.) which shows what travel and education has done for him.

I was also the doctor for some Negritoes from Luzon, Philippine Islands. They were "Dog-Eaters", and had difficulty in getting dogs while they were in New Orleans.

#### DISCUSSION (close)

Dr. Robert R. King:

I am sorry to have to make a report on the pygmies. Mr. Verner was not a missionary at the time he was exhibiting pygmies; he had gone out at one time as a missionary but had been dismissed. The people he brought here as pygmies were only children, one of them is still living around Luebo and goes about saying "Me pygmy, me pygmy," though at this time he is 6 feet tall.

We do not have any more malaria around our immediate section than is found in this territory, due to the fact that our drainage is good and we are away from the larger bodies of water, it being 100 miles to the nearest navigable stream.

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#### PNEUMONIA FROM THE STAND- POINT OF THE GENERAL PRACTITIONER.\*

S. B. WOLFF, M.D.,  
OPELOUSAS, LA.

I am glad indeed to be accorded a place on this program to discuss in general terms the subject of Pneumonia from the standpoint of the general practitioner.

The reason for the selection of the title is that this paper necessarily lacks the statistical and laboratory data, which I, as a general practitioner, have been unable to compile. But end results are more eloquent in the practice of medicine than are all the statistics, and it is with these ultimate results that we are concerned.

I will say, by way of introduction, that since using the principle and treatment which I shall presently outline, my results have been more successful and uniform than by any previous method; that Pneumonia as a disease has not been such a bugbear as heretofore; that I've treated the different forms of Bronchitis with an abiding faith that I would not return to the bedside twelve or

twenty-four hours later and find an incipient Pneumonia.

Again I will state that, as far as I know, my idea is original; for I have never heard nor read this exact conception expressed any place. However, medical literature is so voluminous, and my facilities for research so limited, that I will gladly concede this on proper evidence; but if this paper serves no better purpose than to call to your attention an antiquated principle of therapeutics, which proves of value in the treatment of such a fatal disease, then I believe it will serve a useful end.

The following facts of Pneumonia are well known:

First, it is essentially a winter disease.

Second, it attacks all ages and sexes.

Third, it is particularly fatal to the aged.

Fourth, secondary Pneumonia is more fatal than the primary.

And, fifth, that Pneumonia-producing organisms are constantly with us, and under certain bodily conditions, which we term "lowered resistance," they can and do invade the lung tissue and produce disease.

Now, let us search for the reason for its predominance in winter. Certainly the cold itself is not the only factor, for I believe it is not more prevalent in very cold regions than in temperate. My belief is that it is due to change of habit and living conditions.

The scheme of health demands that man ingest, digest and assimilate proper foodstuffs; that part of this material go to energy production, reparation, storage and growth; and that the noxious products of tissue waste find ready outlet in the eliminative organs, viz: bowels, kidneys, skin and lungs.

During the warmer months his diet is less concentrated, he drinks freely, which stimulates the skin and kidneys; while in winter his diet is more concentrated, the cold is rendering his skin less active, he drinks less water, lessening the activity of the kidneys. In other words, in summer the natural factors are acting to satisfy one axiom of health—proper elimination; whereas, in winter the same natural factors, while not limiting the ingestion of food, are preventing the elimination of noxious products.

It is logical to believe that if three of the waste channels, viz: skin, bowels and kidneys, are closed, nature, in its attempt at compensation, will overtax the fourth channel—the lungs. I believe that it is the retention of these waste products, with the consequent lung irritation, by their overtaxation which creates a favorable field for the growth and multiplication of the disease-producing germs. This will explain the winter prevalence; the greater fatality of the aged, for in these cases the eliminative channels are organically diseased; the greater fatality of secondary pneumonia, for here the channels have been overtaxed by the primary process; and the peculiar prevalence and fatality in alcoholics. The opponents of this view will ask: Why do not all nephritics develop Pneumonia? In answer to this I will call attention to the frequent incidence of pulmonary complication in Nephritis, and also to the fact that once renal impairment is recognized, the practitioner spares the kidney as much as possible and overworks the other organs.

Now, the treatment I've used is not specific as to drugs, but is based on the above conception, and summed up in a few words. An attempt is made to overwork the three channels of elimination, namely, skin, bowels and kidneys, thereby saving the lung until the crisis or lysis, as the case may be.

As to treatment: The patient is kept in a well-ventilated room. I am opposed to extremes of cold in treatment for the reason that it prevents proper skin activity. When seen early, a calomel and soda purge is ordered, and if I suspect extreme constipation, Podophyllin is added to insure proper evacuations. In Louisiana I do not believe that calomel can be dispensed with. Hot mustard footbaths are ordered twice daily and directions as to their administration minutely given so as to bring about perspiration, which I consider essential, for is not the much-looked-for sweat on the fifth, seventh or ninth day a good signal? In other words, I've theorized to the extent of believing that nature is trying to eliminate through the skin, hence my duty to assist.

Soda citrate in from 15 to 30-grain doses every two hours constitutes my next step. I think this a wonderful ad-

junct, in that it furnishes an alkaline diuretic and a mild diaphoretic, and I continue it during the course of the disease. Quinine I find also an essential in our state, for the reason that latent Malaria is always with us, and is even present when not demonstrated by the best technical procedures. I know that experts in this line will deny this with furor, for they claim that they can demonstrate the parasite whenever present; but experience has taught me differently, when I had no reason to question the laboratory technique. Hence quinine is given to adults, from 12 to 15 grains daily, and its effect on temperature noted. If found beneficial, it is continued; otherwise it is discontinued. Solis-Cohen of Philadelphia recommends 30 or 40-grain doses daily. I believe the good effects he has noted have been from its diaphoretic action. I do not like quinine in huge doses for the reason that it is very depressing, produces cerebral congestion, hence nose bleeds; it produces pulmonary congestion when given in large doses.

If on the fifth or sixth day there is no change in temperature conditions, I become suspicious of complications, especially in children, non-symptomatic Otitis Media and Pyelitis. For the former, examination by an Otologist is necessary; for the latter, citrate is discontinued and urotropin ordered. Here is an excellent drug and will often be the means of lowering temperature and promoting a favorable outcome, for I believe that routine urine examinations will more often reveal a pyuria than is generally suspected. Believing the kidneys to be a sort of natural drainage channel for respiratory infections, and that the pus is often an offending source in the kidney from its attempted elimination.

As to sedatives: When the cough is annoying, a mild cough mixture is ordered; but I am opposed to the unrestricted use of morphine and codeine, as they favor retention. In fact, if proper elimination is obtained, very little need will arise for the use of opiates. The hot mustard baths, properly administered, will serve as sedatives, especially in children. In the early stages coal tar derivatives, as aspirin, or even, acetanilid, have been of service in conjunction with the ice cap to reduce fever, and I

have had no bad results in their conservative use. The much-mooted use of Digitalis in Pneumonia must be mentioned through courtesy. Personally, I have not used it much; would not have any objection to its use, as it is a good heart tonic, and a useful diuretic. Strychnin is also of service as a general tonic.

Diet should be light and nutritive: liquids, such as broth, fruit juices, malted milk, and the various mixtures of alcohol and beef juice. Nourishment is ordered every two hours.

This conception has further helped me in lessening the incidence of Pneumonia in my practice. As previously stated, I have no specific drugs for the prevention and cure of Pneumonia, but I believe that if the conception of elimination is practiced in the lesser respiratory and infectious diseases where pulmonary complications are anticipated, then the incidence of Pneumonia will be lowered.

#### DISCUSSION

Dr. A. A. Herold (Shreveport):

I rise a little reluctantly to open the discussion of this paper when I see medical men of eminence in the room. I want to say that this is a good, common-sense paper the Doctor has given us, but I cannot feel that he has covered the treatment of pneumonia when he fails to speak of the specific action of anti-pneumococcic serum in Type 1 pneumonias, and of the new so-called antibody solutions with which such wonderful results are being obtained by subcutaneous use. This latter preparation was formerly used intravenously, but this was so often attended by severe re-action that it is being used more conservatively.

The Doctor's reference to the lowered resistance which gives rise to pneumonia is very good and I heartily approve of his idea as to the most valuable drugs in pneumonia. If I were asked to choose the remedies which I consider of most value I would say pure water, saline laxatives, and digitalis. Digitalis is a drug which is of no value after the heart has failed. If you want to get good results you must give digitalis before acute dilatation has started, and that can be told by the blood pressure. When the systolic pressure gets as low as the pulse rate then it is time to start digitalis. If that is no criterion you can make careful examination of the cardiac area.

One important thing is in reference to quinine. I do not agree with the doctors of Louisiana and other parts of the South who think that quinine is of value in pneumonia and other diseases because of the prevalence of malaria. We have a great deal of malaria in the South, it is true; but the value of quinine in pneumonia or in other

diseases is not on account of its anti-malaria affect, but rather because of its well-known action in promoting the action of the phagocytes. Doctor Solis-Cohen recommends it empirically, but not as an anti-malarial remedy. I think in some cases quinine is beneficial; in others it is very depressing, and in cases of pneumonia without evidence of malaria I would first try to treat them without quinine; then if I did not get results I would try quinine.

Dr. Oscar Dowling (New Orleans):

Doctor Wolff said he did not have statistics. I have some here that I thought might be of interest.

In 1922 there were reported by the doctors of Louisiana 1504 cases of pneumonia. We found 381 deaths recorded from pneumonia that were not included among those cases reported. In other words, they were secured from death certificates. That made a total of 1885 cases that we know of in 1922. In 1923 there were reported 1691 cases, but 1008 cases were found on the death certificates that had not been reported, making a total of 2,699 cases of pneumonia in 1923, against 1,885 in 1922, an increase of 43 per cent. I want to bring that to your attention to impress upon you the importance of these reports. Here we found all these cases, and we do not know how many more cases were not reported. We do know that pneumonia has been on the increase in recent years and in some States they have been making special efforts to control it. The State Board of Health did think of sending out questionnaires, but we concluded it was too late to send them this last season, and we know the doctors get tired receiving questionnaires. We do not want to overtax the doctors, but we do want you to realize the importance of these statistics.

Dr. J. J. Ayo, (Raceland):

I would like to ask Doctor Herold to give a detailed account of his use of serum in pneumonia, for the benefit of the members of the Society.

Dr. A. A. Herold (Shreveport):

As far as specific serum is concerned, we have to know that we are dealing with Type No. 1 pneumonia. If you have Type No. 1 pneumonia you get a re-action from the intravenous administration of the serum, provided you use it in large enough doses—150 to 200 cc in 24 hours will usually give you a quick crisis, followed sometimes by a slight secondary rise of fever. In other types it is of no value so far as we can see.

As to the antibody solution to which I referred, it is rather new yet. One firm puts it out under the name of antibody, and another under the name of pneumonia antigen. We have not used it, but have seen it used. If given subcutaneously and repeated as often as directed you get some favorable influence in almost any type of pneumonia.

Dr. Homer Dupuy (New Orleans):

The essayist touched upon otitis media in connection with pneumonia in children. It is of great importance to remember that we have an otitis media without pain.

Yet we all look for pain. The absence of this usually prominent symptom may mislead us in not suspecting the ear. Continued septic temperature in the absence of further lung trouble may be caused by a painless ear affection. In acute infection of the middle ear the Mastoid is always more or less involved, therefore pain on pressure over the mastoid, on one or both sides, will suggest trouble in one middle ear, or in both.

Do not use oily solutions or argyrol in the ear canal to relieve pain. It does no good and blocks the field with debris, complicating the examination.

Dr. I. I. Lemann (New Orleans):

There is some scientific basis for believing in the specific action of quinine in malaria. That has been based not only upon clinical investigation, but upon laboratory investigation as to the effect of quinine salts upon the course of pneumonia. Some time before the Great War began—about 1912 or 1913, there was produced in Germany a quinine salts called "Optochin" which seemed to have a specific action in cases of malaria. Unfortunately, however, there were some cases of deleterious effect upon the optic nerve reported from those patients, and further observation was halted by the outbreak of the War. Since the War there have been some other reports of cases on which optochin was used. I rise to suggest that the effect of quinine in pneumonia may not be and probably is not due to its anti-malaria effect.

Dr. S. B. Wolff (closing):

I want to thank the doctors for their discussion. In answer to Doctor Herold's remarks concerning the serum, I am not unaware of the efforts of the Rockefeller people to furnish us with a specific serum for this disease, nor am I lacking in appreciation. But the reason for my not mentioning it in this paper is that I do not think it practical at this time for the general practitioner. Good results have been reported I think with the Type 1 serum, but that is about the extent of the treatment. However, our laboratory facilities are not always such that we can work out these fine differential points, hence I did not mention it in my paper.

As to the action of quinine, in conversation with a good many of my confreres in this part of the country I find they have had the experience of having negative malaria findings and positive results with the use of quinine, which we have attributed to its anti-malarial properties. As to its leukocytic properties, that is also to be taken into consideration. Recently a surgeon named Horshey, of Virginia has reported a series of cases of postoperative rise of temperature in which malaria plasmodia were not found, and which resolved under the use of quinine.

As to the use of digitalis, I have not had much experience with it because I am afraid of it. As to low blood pressure and its effect on the heart, I think the effect is caused by the action of the poisons of the disease. I believe there are too many men who in their attempt to relieve cough and pain give sedatives and treat pneumonia simply from the standpoint of the lung findings and not from the standpoint of bodily ailment, and it is the non-elimination of poisons that produce the bad effect on the heart. A low blood pressure may be considered an early evidence of renal involvement, because in nephritis we have in the beginning a low blood pressure and later on a rise.

I want to stress again the point brought out by Dr. Dupuy, that otitis media in children does not always produce symptoms. A good many of us think we are treating pneumonia when the temperature is kept up by pus in the ear which does not produce pain. In my last case of pneumonia the temperature remained elevated to 104 degrees to the eighth day. This was a child in the rural section. The ear drum was opened about five in the afternoon and the next morning the temperature was down to 101 degrees, and the child made an uneventful recovery. I was listening to the lungs, thinking of empyema.

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#### FIVE CASES OF PNEUMONIA IN WHICH MONILIA PULMONALIS WERE DEMONSTRATED IN THE FRESH SPUTUM.\*

FOSTER M. JOHNS, M.D.,  
NEW ORLEANS.

In 1905 Prof. A. Castellani described as occurring in Ceylon a variety of broncho-pneumonia that presented clinically a mild or severe pneumonia which was apparently caused by several varieties of a yeast-like fungi of the genus *Monilia* (Persoon).

In the mild type the general condition of the patient was good. There was usually little or no fever, but a productive cough with a muco-purulent expectoration containing numerous monilia. The condition would last a few weeks or months and would terminate in recovery or progression into the severe type.

The severe type closely resembled acute phthisis. There was moderate fever of a hectic type. Emaciation was rapid and noticeable. The physical findings in the chest revealed patches of dullness, fine crepitations and pleural rubs. The sputum was prone to become bloody, and contained numerous mo-





Fig. 1—A

A. Mass of yeast-like budding forms as found in sputum.

nia. This type was inclined to become fatal.

Following Castellani's articles<sup>1</sup> numerous cases have been placed on record from many tropical and sub-tropical countries the references to which are too voluminous to quote here. In the reference given above Castellani reports a recent case from England. Six cases were reported by Drs. Joeke and Simpson from England<sup>2</sup>.

Only two cases have thus far been reported from the United States. The first was by Drs. Boggs and Pincoff from the Johns Hopkins Hospital<sup>3</sup>. The second by Dr. Chas. E. Simon of Baltimore<sup>4</sup>. By personal communication I am informed that autopsy of a case of meningitis in the Johns Hopkins Hospital revealed the cause to be a monilia.

*Monilia Pulmonalis* is a general name given to those yeast-like fungi found living in the deep respiratory passages and which in suitable culture media develop short septate hyphae which differentiates them from the simple yeasts or *saccharomyces* which reproduce by simple budding only. In the exudate from pathologic lesions the body (thallus) is found mostly as an oval or round budding yeast-like form with an occasional short mycelial thread. (See Fig. 1A.)

The characteristic moniliform growth on culture media is shown in Fig. 1B, which must be differentiated from the Genus *Oidium* by the failure of the latter to ferment the sugars with produc-

tion of gas. There are many different varieties of monilia described, the differentiation being accomplished by their varying reactions with the usual sugar medias. Case V of my series was the only one that I attempted to classify. This proved to be *M. balconica* in that it produced acid and gas with glucose only.

Briefly, the clinical pictures of the cases that I wish to report are as follows:

Case 1. A third course medical student, Mr. S., was confined to bed for several weeks with a moderately severe broncho-pneumonia.

Convalescence was slow and marked by an extremely annoying productive cough. Rales were present at the bases of both lungs. Repeated examinations of sputum failed to show any tubercle bacilli, but numerous monilia were found and proven by cultures. Rapid recovery was made after institution of potassium iodide in full dosage.

Case II. Through the courtesy of Drs. T. F. Kirn and A. Jacoby I was sent a sputum from Mrs. V., a rather elderly lady, who was acutely ill with broncho-pneumonia. She was described as being very toxic, with dulness and broncho-vesicular breathing in the right infrascapular region and a temperature of only 101 to 102 F.

The sputum presented numerous large masses of bloody necrotic material of practically no odor. Microscopically it was found to contain pus, blood, necrotic material, a few bacteria and numerous yeast like cells. Fresh material was collected with proper precautions against outside contamination and when examined immediately after being raised was found to contain the same yeast. Cultures promptly developed short segmented hyphae proving the presence of the type monilia.



Fig. 1—B

B. Short, septate hyphae produced in culture.

With creosote and other expectorants the case made an uneventful recovery without the usual iodide therapy recommended by Castellani.

Case III. Mr. J. A. was seen in consultation with Dr. C. A. Borey. This patient of 51 years old was emaciated and markedly anemic. He had been confined to bed for a little over a month with a septic temperature of 99 to 101 F. Chilly sensations and sweats were frequent. The physical findings revealed a few scattered rales, and the patient was considerably annoyed by a productive cough. The blood picture revealed a considerable leucocytosis in addition to a severe grade of secondary anemia. The urine contained albumin and a few hyaline casts. The sputum resembled a soft bread dough macerated in water and had a distinctly sour odor. Microscopically there were numerous pus cells, bacteria of all kinds, and enormous masses or islands of yeast like fungi a few of which were elongated and joined in short chains of two or three members (See Fig. 1). Cultures made from freshly raised sputum proved the organism to be a monilia.

On large doses of potassium iodide the physical findings and fever rapidly subsided, the patient completely recovered, and has remained well and free from chest symptoms for the past two years.

Case IV. Mr. F., was seen in consultation with Dr. Jno. B. Elliott and Dr. R. M. Penick. Symptoms began with a severe 'cold' for some ten days which was succeeded by a toxic paralysis of the left eyelid. At this time there were practically no physical findings. The temperature was normal, but the blood smear showed a considerable increase in neutrophiles. By the end of the second week a slight temperature had developed. A considerable cough with production of much sputum was found, and upon physical examination there was noted broncho-vesicular breathing and a few coarse rales at the base of the right lung. The blood showed the presence of a great increase in neutrophiles. The sputum showed numerous tube casts from  $\frac{1}{2}$  to 3 inches in length, blood, pus and necrotic material. Microscopically the casts were composed of fibrin, epithelial and pus cells and a considerable number of bacteria and monilia, the latter presenting both the budding and mycelial forms. Many examinations were made, some directly after the sputum was raised, and all contained enormous numbers of monilia. There were always numerous bacteria present, including diphtheroids.

By the end of the fourth week there was a complete consolidation of the entire right lung, with small pneumonic processes scattered throughout the left. The patient became extremely toxic and died in coma. A few days before death in a violent coughing spell an enormous bronchial cast was expelled. The cast was a full four inches long and apparently filled the entire right bronchus, with finger like processes filling the whole bronchial tree of the right lung. Por-

tions of this cast were examined and found to be heavily infected with monilia.

Iodides were given in full dosage throughout the earlier stages of this case. Autopsy was denied.

Case V. Master H. L., a well developed lad of 14 years was seen in consultation with Dr. Walter Levy. There was a severe broncho-pneumonia, the temperature was high, and prostration marked. The blood gave a leucocytosis of 45,000 total and 91 per cent neutrophiles. The urine contained a trace of albumin and numerous hyaline casts. The sputum was very viscid and caused considerable effort to raise.

Microscopically it consisted of muco-pus, some little blood and a large number of moniliform yeasts. Very few bacteria were noted, and they apparently were not pneumococci. Many of the monilia were in mycelial form.

Upon investigation it was found that a typical thrush involving the throat and entire buccal mucosa was present. Scrapings from these lesions also gave numerous monilia, so that infection of the sputum from this source could not be entirely ruled out. However, well washed specimens of the tenacious sputum still contained numerous monilia which were easily cultivated in pure culture. A study of the growth of this fungus in culture revealed an organism of the type *M. balconica* (Castellani).

With iodides in full dosage and potassium chlorate locally in the mouth the patient made an uneventful recovery.

*Comment:* While I have not been able to find any direct evidence in the literature or in the study of these cases to prove the occurrence of monilia even in the superficial tissues of the deep respiratory tract, their established pathogenicity in the mouth and throat makes their finding in large quantities in pathologic exudates from the deeper respiratory passages very significant of a direct etiologic relationship, and at least as contributing factors in the production of these cases of pneumonia.

#### REFERENCES.

- <sup>1</sup>A. Castellani, *The Lancet*, April 24, 1920.
- <sup>2</sup>T. Joekes and R. H. Simpson, *The Lancet*, July 21, 1923.
- <sup>3</sup>Boggs and Pincoff, *Johns Hopkins Hosp. Bull.*, 1915, XXVI, 407.
- <sup>4</sup>Chas. E. Simon, *Am. Jour. Med. Sc.*, Feb., 1917.
- <sup>5</sup>A. Castellani, *The Lancet*, May 15, 1920.

#### DISCUSSION.

Dr. H. E. Menage (New Orleans):

I am interested in the paper read by Dr. Johns from the skin standpoint and I would like to ask whether the *Blastomyces* are related to the organism he described; also whether this organism is the cause of any skin manifestations; what is the difference between *Blastomycosis* of the lungs and the condition described by him. I have been

very much interested for many years in the blastomycetic infections of the skin, of which we see a good number, and the general involvement of the internal organs by that organism.

Dr. W. H. Seeman (New Orleans).

I certainly was delighted to listen to Doctor Johns' paper and he deserves a great deal of credit for investigating these cases as minutely as he has. I am convinced from my experience that very frequently much information might be obtained from specimens of sputum that heretofore has been neglected.

There is an important point that Doctor Johns brought out, but did not emphasize, and that is in regard to the collection of sputum. We have innumerable specimens of sputum sent in for examination to the State Laboratory, but there is very little attention paid by the physician to procuring that specimen in a state which renders it practical for examination—in other words, without contamination. If proper containers are used and attention paid to the collection of sputum I am sure much information could be obtained. We have so many of these yeast-like organisms, especially in the southern climate, and we frequently find them in the sputum, but in most instances they are simply contaminating organisms and the specimen not fit for examination.

Another important point is in regard to continuing the search for the cause of pulmonary disease, that it should be more prolonged than where tuberculosis is suspected. I believe a physician should not be content until he has obtained a specimen of sputum and made further investigation.

Dr. I. I. Lemann (New Orleans):

There are probably many case of fungus infections of the lungs which masquerade as tuberculosis.

Dr. Bel reported a number of cases of blastomycetic infection from the Charity Hospital three years ago.

I would like to point out the great value of suspecting yeast and fungus infections of the lungs where no tubercle bacilli are found upon repeated examination, and to make the further suggestion that the sputum should be examined in fresh mounts in addition to the dry stain smear. I think we should probably find in that way many cases of fungus infection that are now overlooked because of the simple routine of smearing and drying and staining the preparation.

Dr. F. M. Johns (closing):

Answering Doctor Menage, we differentiate this organism from simple yeast cells by the fact that blastomycetes are protected by a thick, double capsule. They must be demonstrated in the tissue to be diagnostic because there are many different types that are saphrophytic. The clinical types of blastomycetes are the cutaneous variety and the organic. The organic are separate entirely from the cutaneous variety. The monilia do not produce real spores and it does not have the thick capsule of the blastomycetes.

If we have a form of fungus (Monilia) that invades the sub-mucosa of the mouth, nose and throat it is reasonable to suppose it will also produce a broncho-pneumonia; and blocking of the tubes would produce an intra-vesicular type of pneumonia.

## THE THERAPEUTIC APPLICATION OF THE ROENTGEN RAYS.\*

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Wilhelm Conrad Roentgen announced his discovery, "a new kind of ray," at a meeting of the Physical and Medical Society of Wurzburg in December, 1895, and in July, 1896, gave another paper before the same society, entitled "The Demonstration and Further Practical Application of the Rays." This announcement spread quickly over the world, and very soon after, Shiff and Freund treated nevus, hypertrichosis, cancer and tuberculosis with Roentgen-rays, the first recorded therapeutic application of the new agent. Roentgen died February 10, 1923, just as Roentgenology was taking its place as a highly specialized branch of medicine, and with him passed one of the greatest discoverers and men of learning of all time.

Roentgen-ray therapy, like many other valuable therapeutic measures, has gone through the stages of extreme optimism, when over-zealous and insufficiently trained men wrought disaster rather than cure; and of pessimism when ultra-conservatism held sway; and has only recently been placed on a firm, sane basis, with the realization that, although its field of usefulness is wide, it cannot be suitably applied to all diseases, nor to all phases of the same disease. The Roentgen-ray is so tremendously potent an agent that no one should undertake to administer it without first familiarizing himself with the fundamental principles of its uses and mode of application. He should know the relative sensitiveness of the normal structures, of neoplastic and pathologic cells, and the usual clinical course of different types of neoplasms and diseases to be treated. He should understand the physical principles underlying the rays, and be cognizant of the dangers to oper-

\*Read before the Seventh District Medical Society, Crowley, Louisiana, March 6th, 1924.

ator and patient, in order that these may be avoided by proper precautions.

Bragg asserts that the biologic action of the Roentgen-rays depends upon ionization,—a dissociation of the elements comprising the cell; and, further that most of this ionization is accomplished by corpuscular secondary rays formed in the tissues.

#### *Radiosensitivity of Cells and Tissues.*

Bergonie and Tribondeau have formulated the following laws pertaining to the action of Roentgen-rays: All living cells, whether normal or pathological, are in some measure radio-sensitive. Sensitiveness to a given quantity of radiation varies with different types of cells, and the reaction of the same type varies in different species of living beings. The younger the cell and the greater its karyokinetic activity, the more sensitive it is to radiation. Cellular sensitiveness increases inversely with the degree of morphologic and physiologic differentiation. The most sensitive part of a cell is the nucleus, and the period of greatest sensitivity is that of mitosis. According to Altman and Wetterer, the various tissues of the body are radio-sensitive in decreasing order, as follows: lymphatic tissue, testicle, ovary, skin of the face of children, cartilage in children, mucous membrane, skin, sudoriferous glands, sebaceous glands, connective tissue, muscle, cartilage and bone. They also indicate that leukemia is most sensitive to the rays, and in order of diminishing sensitivity list pseudoleukemia, psoriatic patches, lupus hypertrophicus, and tuberculous lymphoma. Ewing gives the radio-sensitivity of neoplasms as follows, in the order of decreasing sensitivity: cellular, carcinoma, anaplastic carcinoma, angioma, adenocarcinoma, basal-cell carcinoma, squamous-cell carcinoma, neuro-fibroma.

#### *Dosage.*

Since the skin reacts readily to irradiation, the dose which will produce erythema of the skin is generally accepted as a standard for comparison of all dosage used in Roentgen-ray therapy. The biological reaction of the skin is known as an erythema of the first degree, and is that amount of irradiation necessary to produce an epilation of the scalp; this will likewise produce a mild erythema on most parts of the cutaneous envelope

in from ten to twelve days. There is, however, a wide variation in the sensitivity of the skin of different individuals, and a dosage producing a mild erythema in one patient may not produce any noticeable change in the skin of another. As has already been mentioned, the skin of children is very sensitive to radiation, whereas the skin of older persons can often be exposed without harm to doses more than 100 per cent above normal. The skin of blonds is markedly sensitive, whereas the skin of a brunette is more resistant.

#### *Filtration of Rays.*

In the treatment of very superficial malignancies and skin diseases, unfiltered irradiation is used since the biological effect is directly proportionate to the amount of rays absorbed. In deeper structures, in order to deliver adequate depth dosage and at the same time protect the skin and superficial tissues, filtered irradiation and increased voltage becomes necessary; this also permits dosage of penetrating short wave length. Failure to understand the necessity for difference in dosage, voltage and filtration has led to many unfortunate sequela in the past, and I abhor the fact that in many Roentgen laboratories I have visited, deep-seated neoplasms are still being treated with ten or fifteen-minute exposures, with a filter of a few millimeters of aluminum, or 0.5 mm. of copper, and an 8 or 9-inch spark gap, but without the slightest idea of the erythema dose, or any comprehension of the quantity or the effect of the radiation which is penetrating the deeper tissues. Deep Roentgen-ray therapy should only be undertaken when it can be carried out in a highly scientific manner, and a dose applied to the tumor which will inhibit the growth of the neoplasm, even if it does not effect a permanent cure. If undertaken this way, the results are most encouraging. Whether or not such treatment should be combined with surgery, and whether it should be used pre-operatively or post-operatively, or both, depends on the extent of the lesion when presented for treatment, the location of the lesion, and the presence or absence of malignancy and metastasis. In inoperable cases, life is often greatly extended and pain relieved by irradiation. The increasing

co-operation of the surgeon, internist and Roentgenologist cannot fail to increase the number of cases which will come to the Roentgenologist early enough to receive the full benefit of this type of treatment. As Desjardin has pointed out, "radiotherapy is not a cure-all in malignant conditions," but... "as a palliative agent, it is of very definite value in many forms of malignancy, and its judicious employment can render the greatest service to the unfortunate victims."

#### *Skin and Superficial Roentgen-ray Therapy.*

The treatment of lesions of the skin and superficial tissues with irradiation is such a comprehensive subject that I will limit my discussion to a few of the more common conditions with which I have had experience. Roentgen-rays are the most potent agent in the armamentarium of the dermatologist, and their use is acknowledged as the most successful single remedy. In a recent article, McKee and Andrews list more than eighty skin conditions which are amenable to Roentgen-ray treatment.

*Acne Varioliformis and Vulgaris.*—Most brilliant results have been achieved in the treatment of these conditions. The rationale of treatment depends upon the fact that irradiation diminishes the functional activity of the sebaceous glands. Acne, with the possible exception of the pustular type, responds very admirably to weekly fractional dosage of 1/8 to 1/4 skin dose, filtered technic, over a period of one to two months. Roentgen-ray treatment should, however, be supplemented by a systemic treatment, as many a failure is due to neglect of this phase.

*Carbuncle and Furunculosis.*—In no other condition is Roentgen-ray treatment more effective. The relief obtained seems magical, as the pain disappears almost completely within a few hours after treatment. The field should be shielded closely, and intensive filtered technic applied. Abortion is possible when treatment is instituted early enough. If definite necrosis has occurred, the lesion should be incised following irradiation.

*Hard and Soft Corns.*—These may be readily cured with one or two intensive filtered treatments.

*Keloids.*—In this condition irradiation is the sole means of establishing a permanent cure, and no instances of recurrence after irradiation have been recorded in the literature. The field should be closely shielded and intensive filtered treatment applied.

*Lupus Erythematosus.*—Irradiation often fails to relieve this condition. However, in many cases fractional unfiltered doses may be applied, and one is justified in pushing dosage to full erythema, for lupus erythematosus in its natural course is followed by atrophic scarring. When fractional doses fail, more intensive treatment may accomplish the desired results.

*Onychomycosis.*—The nail should first be softened in warm glycerin, and then intensive unfiltered treatment applied.

*Psoriasis.*—Local and generalized psoriasis respond in a great many cases to radiation treatment. When the disease is distributed over large areas, irradiation of one area will often benefit the untreated ones. Unfiltered fractional treatments are best, and here, also, the benefit of constitutional treatment must not be overlooked.

*Verruca.*—Cases of verruca almost without exception respond satisfactorily to intensive filtered irradiation.

*Eczema.*—The word "eczema" is so inclusive a term that it has come to mean very little to the modern dermatologist unless the type is specified. We will consider only the acute, chronic and seborrheic types. In the treatment of acute vesicular eczema, when inflammation, vesiculation, pustulation and exudation of the scalp, face, feet, hands, or any other part of the cutaneous envelope are present, I have found that sub-fractional treatments of unfiltered rays at weekly intervals have given the best results. On account of the sensitivity of the cells overdosage should be avoided, as it will often cause an aggravation of the condition. This may wisely be supplemented with a soothing lotion such as Dodd's formula.

In the chronic types of eczema, when the skin has become thickened and infiltrated, and stimulating remedies are necessary to promote the absorption of cellular exudates, more rigorous treatment may be administered. In such cases semi-intensive or sub-intensive weekly unfiltered irradiations may

be administered, supplemented by a very mild ointment as a local application. In both the acute and chronic types the value of constitutional treatment and corrective measures cannot be overestimated.

Whether or not seborrheic eczema is due to fatty hypersecretion of the sweat glands or of the sebaceous glands, I am not able to say. However, treatment by irradiation in fractional unfiltered doses produces satisfactory results in most cases. Treatment should be discontinued as soon as improvement is evident.

*Hodgkin's Disease.*—The literature on the Roentgen-ray treatment of Hodgkin's disease is voluminous, and all agree that in the great majority of cases it is possible to effect a temporary cure. Certainly patients can be kept alive and in comfort for many years by the intelligent use of Roentgen-ray treatments. In many cases the large glandular masses are reduced after the first treatment. In treating this condition the entire lymphatic system should be subjected to sub-intensive filtered irradiation, and the procedure repeated as the case demands.

*Tonsils and Adenoids.*—A careful study of more than seventy cases of diseased tonsils and adenoids of all types convinces me that the lymphoid type, as well as the fibrous type which is not definitely infected, respond to Roentgen-ray therapy in more than 80 per cent of the cases. Usually two treatments suffice.

*Hyperthyroidism.*—The effectiveness of irradiation treatment in this condition is steadily gaining recognition. Indeed, the pendulum of opinion has swung so far that many men of experience say without hesitancy that Roentgen-ray therapy offers better results than surgery. Colloidal, cystic and simple goiters with no toxic manifestations are not suitable cases for irradiation, but toxic adenoma should always be given the benefit of Roentgen-ray treatment before surgery is resorted to. In the treatment of hyperthyroidism the treatment of the individual case should be carefully studied, and treatment administered according to the patient's needs. I am using the following factors: 120 kv., 5 ma., 30 cm. F. S. D., 4 mm. Al. plus a layer of felt. Treatment is di-

rected through three ports, one over the thymus, and one over each lobe of the thyroid. The larynx is carefully protected during treatments to avoid damage to this delicate structure. The period of each treatment is generally five minutes over each port, and this is repeated in two, four or six weeks. In the few cases with which I have had experience the results have been altogether satisfactory, and the patients restored to health.

*Basal-cell Epithelioma of the Skin.*—This lesion, often referred to as rodent ulcer, extends through the superficial lymphatics and rarely involves the lymph nodes, even after many years of growth. A permanent cure can be expected in from 85 to 95 per cent of cases. The superficial ulcerated type, and the type covered with a crust are best treated with unfiltered irradiations. In the ulcero-nodular lesions, where there is evidence of infiltration and ulceration extending into the subcutaneous tissues, and in some instances into muscle and other structures, in deep infiltrated lesions, of the nodular and verrucous types, filtered irradiation is best employed.

*Squamous-cell Epithelioma (Prickle-cell).*—In this type, because of the rapidity of metastasis, the results are not so good. However, if the lesion is recognized sufficiently early and treatment properly applied, the growth can be eradicated. In this type of skin malignancy the importance of careful study of each case and of individualized treatment, cannot be over-emphasized. Should there be suspicion of metastasis in the lymphatics draining the site of the lesion these should receive irradiation.

In the treatment of epitheliomas of the skin, whatever the type, our efforts should be directed towards destroying the cells within as short time as possible. It is furthermore important that these lesions be not shielded too closely; at least one-half to three-quarters of an inch of apparently healthy skin should be included in the area treated, and a dose sufficiently hyperintensive to show evidence of a rather severe reaction should be administered. Nothing short of a second degree dermatitis should be considered sufficient. Treatment may wisely be repeated within four to six weeks, providing the reaction subse-

quent to the first treatment has subsided. In many cases it may be necessary to repeat this irradiation until four or five treatments have been administered.

In treating any condition with Roentgen-rays, chemicals such as iodine, mercury, chrysarobin, sulphur, tar, salicylic acid, and any other irritants should not be applied to the skin, nor should any treatment be administered to a lesion to which these chemicals have been applied until at least ten days have elapsed since the last application. Failure to consider this fact may be the cause of a serious reaction, as all of these chemicals will markedly increase the effect of irradiation.

#### *Deep Roentgen-Ray Therapy.*

It is the concensus of opinion among Roentgenologists in this country and abroad that the type of Roentgen-ray therapy now employed in the treatment of deep lesions, modified and improved in the light of further scientific investigation, and clinical successes and failures, is producing results which the old type of apparatus and treatment could not approximate. However, a perusal of the literature gives the erroneous impression that all that is necessary is to follow a stereotyped plan of treatment and administer a certain percentage of a given dose to a certain volume of tissue, in order to obtain satisfactory results. Indeed, in many instances this is what has been done: the neoplasm or diseased tissue has been treated, and the patient and his general condition forgotten. Following such treatment, results naturally fall short of the mark. It should always be borne in mind that the present ovary, sarcoma, epithelioma, and carcinoma dose as given by Seitz and Wintz are relative terms, and do not imply that they are effective dosage for all cases. Whether or not the entire dose should be administered within twenty-four hours, or should be divided and administered over a longer period can only be determined after a careful study of the individual case. I believe that the present technic of 200 kv., 50 cm. F. S. D., 1 mm. Cu. plus 1 mm. Al. suffices. The technical difficulties encountered when operating at higher voltages does not encourage the use of more than 200 kv.

*Hemorrhagic Metropathies.*—Hemorrhages of the uterus, due to conditions other than fibromyomas and malignancy, are readily relieved by Roentgen irradiation. Usually an ovary dose is administered. Its action is positive and painless. Desjardins says: "It is one of the triumphs of irradiation therapy."

*Uterine Fibromyomas.*—Practically all tumors of the uterus which do not reach to the umbilicus can be made to disappear. Tumors larger than this can be reduced in size, but in such cases surgery rather than irradiation is the method of choice, particularly in women less than forty years of age, who have not yet reached the menopause, and who desire to bear children. Pedunculated tumors, also, are best removed by surgery, because of the possibility of slough following irradiation. Following the Roentgen-ray treatment for metropathies and fibromyomas, an artificial menopause is produced in from one to three months, depending on the dose administered. Usually an ovary dose suffices.

*Carcinoma of the Cervix and Body of the Uterus.*—Inasmuch as surgery is now considered inadvisable in cases of carcinoma of the uterus, unless the disease appears to be limited to the cervix, and mobility is not interfered with, the sole hope of the patient lies in irradiation treatment. If there is moderate lateral infiltration, or extensive lateral involvement and fixation, irradiation will, if properly carried out, salvage many a "hopeless" case. In any event, it will increase the comfort of the unfortunate patient.

*Carcinoma of the Breast.*—The writer feels that every case of carcinoma of the breast, in which the malignant tissue has been removed by operation, should receive early post-operative irradiation, for even after a most careful radical operation there may remain somewhere in the field small islands of carcinoma cells. Irradiation will destroy these cells and at the same time seal up, as it were, the lymphatics and blood vessels which were left open by the knife. The ideal treatment of carcinoma of the breast is pre-operative irradiation, early radical removal of the tumor, and early post-operative irradiation, thus striking three death blows at the carcinoma cells.

*Leukemia.*—Roentgen-ray treatment is the method of choice in cases of leuke-

mia, and it accomplishes results when no other method can.

*Sarcomas.*—Sarcomas of all types should always receive irradiation treatment in preference to surgery.

In closing, let me urge a closer co-operation between the surgeon, internist and Roentgenologist. It is only by working together and close study of the patient that we can hope to achieve the best results from irradiation.

### MALARIA IN THE SEVENTH DISTRICT OF LOUISIANA.\*

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During the past fifteen months the United States Public Health Service has maintained a field station at Crowley, La., for the purpose of doing research work on malaria. Much of our work in that station has had to do with *Anopheles* production and malaria incidence in the irrigated districts devoted to rice cultivation; but we have made frequent excursions over a much wider range—to the salt marshes on the coast, into the cotton regions to the north, to Lake Charles on the west and to Morgan City on the east. Our work in this region is not yet completed, but a few of the results of our observations may be of interest.

As is well known, the cultivation of rice promotes the production of *Anopheles*. Our observations during 1923 showed that the *Anopheline* output in the Louisiana rice fields is large, although possibly not so large as in the rice country of Arkansas, where we worked two years ago. Larvae may be found within rice fields and at their margins, and large numbers of adults are found in resting places in the vicinity of the irrigated areas. The prevailing species in midsummer is *Anopheles quadrimaculatus*, the chief carrier of malaria in the southern United States. Outside of the rice-growing areas, in the cotton and cane regions of southern Louisiana, *Anopheles* may be numerous in certain localities but are not generally so plentiful as in the rice region.

As regards the prevention of *Anopheles* production in the rice fields it is questionable whether any methods now known are practicable. We have larvi-

cides which destroy mosquito larvae without injuring the rice, but their use over such large areas as the rice fields would be very expensive. It has been proposed that the cultivation of rice within a certain distance of towns be prohibited. Since *Anopheles* in effective numbers may spread fully a mile from a large breeding place, a very wide non-rice-producing zone would have to be maintained around a town—a very expensive matter in a region where rice is the only practicable crop. Before such radical measures are seriously considered one should determine as accurately as possible for the town in question the amount of malaria that could be attributed to rice-field-bred *Anopheles*. Our surveys of certain towns in the rice regions of Louisiana and Arkansas would indicate that malaria, even in the poorer sections of their suburbs, is not generally a serious problem. For the present, it would seem that screening, adequate treatment or carriers and the usual methods of personal prophylaxis would prove more practical in the rice regions than any attempt at wholesale destruction of *Anopheles* or isolation of their breeding places.

We have made some attempts to ascertain the amount of malaria now present in the rice regions of Louisiana and in regions neighboring to them. In these surveys we have depended largely on two methods: First, we have tried to locate as many as possible of the cases of malaria occurring in Crowley and its vicinity. In this work the physicians of Crowley and of some of the neighboring towns have assisted us greatly, furnishing us many slides for examination and much information as to where probable cases could be found. Examinations were not limited to persons with symptoms of malaria. Numerous specimens were taken from other members of a family where a case had been found and of other persons in the neighborhood. Whenever possible, the blood specimen was taken before the administration of quinine. No case was counted positive without the finding of malaria parasites in the blood. By this method of "search and sample" some 90 cases of malaria with demonstrable parasites in the blood were found during 1923. Of course, many cases were missed. Persons failed to consult a physician or



otherwise escaped examination; but, considering our efforts to discover all possible cases, the large area covered and the assistance given us by the physicians, the fewness of the positive cases found seems significant and indicative of a relatively low malaria rate.

The other method of survey consisted of the examination of school children, both for malaria parasites and enlarged spleen. The spleen rates were taken by Dr. K. F. Maxcy of the U. S. Public Health Service during the spring of 1923. The parasite rates were taken by ourselves during the spring and autumn school terms of 1923 and the spring term of 1924. The total parasite rate of 1235 children in 42 schools was 3.2 per cent., including a few schools counted twice because of spring and autumn examinations of the same school. The spleen rate of 190 boys in 8 different schools was 3.7 per cent. These percentages are probably higher than one would obtain by the examination of all school children in the district because in our attempt to find the most malarious localities we included a disproportionately large number of negro schools and of other schools likely to give higher malaria rates. Our survey is being continued and extended, but it is unlikely that further findings will much modify the general average.

The malaria rate was by no means uniform in the various schools. Twenty-three schools with 608 children gave no positives. Twenty-one white schools with 669 children give 1.9 per cent. positives; twenty-one negro schools with 566 children gave 4.6 per cent. positive. The highest rate was found in a negro school in the cotton region of St. Landry Parish, where 41 children gave 17 per cent. positive.

A single examination of a group cannot, of course, detect all malaria carriers; but spleen and parasite rates of children give us a useful, although only approximate, criterion of malaria prevalence in a region. Such rates are especially useful in comparing one locality with another. A comparison of the Louisiana parasite rate with that of some regions with higher and lower rates may be of interest. A group of schools in southern Alabama gave 1 per cent positive; a group in Georgia, 6 per cent; a group of 31 plantation children in the

lowlands of Central America gave 69 per cent. These are to be compared with the Louisiana rate of 3.2 per cent. All are based on a single examination by the same method—the thick film, and by the same examiner—myself.

The rates obtained among children in spring are of interest since such rates give us some information as to the number of winter carriers of malaria. As you know, it is most probable that malaria is carried over the winter by man, not by infected mosquitoes. In this district 875 children examined in the months of January, February, March and April gave 25 positives, nearly 3 per cent. In this group negro children gave 4.0 per cent. positives and white children only 1.5. In the matter of carriers of parasites a neglected negro population is of significance. The negro parasite rate is usually higher than that of white persons. They may suffer less with this disease than do white patients, but they are thereby all the more likely to be carriers of parasites since they are less likely to try to cure themselves. Malaria is a disease by no means inevitable among negroes in the South—negro populations can be found which are practically free from the disease—but a neglected population, whether negro or white, often contains carriers among whom malaria smoulders from year to year.

The type of malaria parasite found shows much the same seasonal variation in this district as generally in the southern United States. In the spring and early summer benign tertian is the prevailing type; in the autumn and winter, estivo-autumnal. Of 115 cases typed during 1923 about 65 per cent were benign tertian, a somewhat higher percentage of this type than one would expect to find in the Mississippi delta.

Summarizing all evidence, it appears that the amount of malaria in this district is relatively small—much less than one would find in many other parts of the South. In many localities in this district cases are numerous enough to make a problem worthy of the attention of the health officer, but in very few localities is there enough malaria to discourage immigration. A farmer need not hesitate to move to this part of Louisiana on account of danger from malaria. It might be necessary for him to

screen properly or to avoid undue exposure to mosquitoes, especially in infected regions, but there are few places in this district where malaria is severe enough to interfere with the development of the country. The swamps of Louisiana are not so deadly as they are painted, and some of the lowest rates we obtained here and in Arkansas were in the midst of the mosquito-haunted rice fields.

As stated above, certain localities in our survey show considerably more malaria than others. The reason for the variation in the malaria intensity of different neighborhoods is worthy of the most careful study, since such study may give us a clew as to the best methods of combatting the disease. We know the factors necessary for the continuance of malaria: sufficient Anopheline and human carriers, a susceptible population and suitable meteorological conditions. It does not follow, however, that in the presence of all these factors malaria is bound to increase or even to hold its own. There are portions of the rice-growing region in which Anopheline intensity has remained high, a sufficient number of carriers persisted to adequately "seed" the region, and certainly an abundance of fresh fuel for infection; yet the malaria rate remains low and apparently continues to diminish.

The study of the history of a disease is not only a matter of much scientific interest but often throws much light on the way the disease is spread. We know that malaria, once prevalent over the greater part of this country situated east of the Rocky Mountains and south of the Great Lakes, has retreated southward, leaving but few strongholds north of Tennessee. In the Southern states malaria has persisted longer but shows a marked tendency to diminish, especially in the case of the more severe phases of the disease. We have the almost unanimous evidence of the older physicians that malaria has greatly decreased in this district during the past 40 years.

It is not within the scope of this paper to discuss in detail the reasons for this general decrease in malaria; only a few phases of the question will be touched on. Of especial interest in this district is the evidence that malaria has decreased in the presence of numerous Anopheles, at all events there is at pres-

ent a comparatively low rate in many parts of the irrigated rice-producing country. We do not wish to minimize the value of drainage, larvicides or any anti-mosquito measure, but we wish to emphasize the fact that malaria may be kept at a low level in irrigated regions where Anopheles destruction is impracticable. Prominent among the factors which help to maintain this low rate are screening and the free use of quinine. Education as to the means by which malaria is transmitted may also have played a part. We know that typhoid fever has greatly diminished in rural regions where the character of the water and milk supply and of sewage disposal has changed but little; but the knowledge of how typhoid is spread has become universal and the precautions based on this knowledge and enforced by physician, nurse and family have doubtless played a part in diminishing this disease. In the same way, a knowledge of the fact that mosquitoes carry disease makes easier the introduction of anti-mosquito measures and encourages people to protect themselves against mosquito bites.

The character of food, water, housing, clothing and the presence of other diseases may act indirectly on the malaria rate. A vigorous, well-nourished individual may be as susceptible to malaria infection as a sickly one, but the disease is harder to cure in the weakly person and relapse is much more frequent. The records of the World War have shown how hard it is to cure the malaria of soldiers wasted by dysentery or undernourishment. From the public health point of view relapses are practically new cases.

The factors we have mentioned: proper housing, screening, food, clothing, water supply, adequate treatment of the sick, sanitary education, are all elements in what we call the standard of living. That malaria tends to decrease as the standard of living rises is no new thesis, but is one which has possibly not received due emphasis; and it is fitting that we stress this point now that we are dealing with regions in which Anopheles reduction is difficult or impracticable. The relation of the standard of living to the malaria rate is strikingly illustrated by the sharp rise in malaria intensity often observed when living

conditions retrograde. Note the high malaria prevalence in the armies of England, France and Germany in southern Europe during the World War, the intense malaria often occurring in temporary laborers' camps, and the increase of malaria with famine as was recently the case in Russia.

To consciously raise the standard of living of a community is not a simple matter; it is not easy by taking thought to add a cubit to the economic stature. But a realization that improvement in living conditions offers a valuable measure against malaria will aid the physician and all the more intelligent members of a community in their efforts to better the general health. And in this effort we are pulling with the tide. The present day tendency is toward improvement, and we have only to further and direct a movement which leads to the diminution not only of malaria but of other ills, social and physical, as well. Further, we are encouraged by indications that a very moderate rise in the social level will accomplish much in malaria reduction. We are not yet in a position to state definitely how much general improvement will suffice to render malaria unimportant, but there are indications that a comparatively slight change in the average standard of life is of significance. We must stress the word "average," for in malaria prevention possibly more than in the case of other diseases the general cultural level is of significance; one cannot adequately protect the whole while a part is seriously lacking; mosquitoes infected in a neglected negro quarter will fly to the most fashionable suburb; a group of carriers will vitiate a whole community.

In summary, the conditions as regards malaria in this district, at least of such parts of it as we know, are encouraging. The malaria rate, except in certain localities, is not high and is apparently decreasing. In the extensive rice-growing regions measures for the prevention of the breeding of *Anopheles* mosquitoes are hardly practicable, but the malaria rate is not generally high in such regions and may be made to decrease still farther. Adequate treatment of the human malaria carrier is an important preventive measure. Education in sanitary matters and encouragement of screening

and of other improvements in living conditions are of prime service. The physician has done much to bring about the decrease in malaria and he has power to do much more. He is not only the healer of a community but, in matters which relate to health, the teacher and adviser as well.

#### DISCUSSION

Dr. Oscar Dowling (New Orleans):

We are very fortunate in having Dr. Barber with us to present this valuable paper, which teaches us that we can live in a mosquito country without necessarily having malaria. The more our people learn to screen their homes and drain the ground immediately surrounding the premises, the greater has been the reduction of malaria in Louisiana. We all know that it does not make any difference how many *anopheles* mosquitoes there are in a community, unless someone visits that community who has malaria there is no danger from the mosquito.

Three years ago I went before the Bankers' Association and urged that they make certain inquiries when they make loans. The majority of loans are made on a moral basis, and if they could ascertain whether a man's home had good water supply, whether it was screened, and there was no breeding place for mosquitoes near the house, whether they had proper sewage disposal, the bank would have much better security than if conditions were such that the family would probably have to fight malaria. That is looking at it from the moral standpoint. I do not know of anything that would help more to improve sanitary conditions throughout Louisiana than if the banks would adopt that policy; but I have not been able to persuade them to do it.

A great many people write in to know how conditions are in certain parts of Louisiana in regard to malaria. The stereotyped answer is that if they will provide a reasonable amount of protection, a house properly constructed and screened, with a good water supply and proper disposal of human and other waste, they can live just as long here as anywhere. Doctor Carter said if we could get rid of typhoid and malaria we would not have any worse health conditions than in other parts of the country.

From 1916 to 1922, there were 12,934 cases of malaria in Louisiana; 3,434 deaths reported. There were more deaths in 1923 than 1922, with 549 fewer cases reported. You understand what that means from an economic standpoint.

When I was in Trinidad, Port of Spain, they told me they had absolutely no malaria in the Port of Spain except that which was imported, and they hoped to eradicate that by giving quinine.

I hope Dr. Barber will be permitted to stay in Louisiana long enough to finish the studies he is making. I am sorry not to have

visited him, but I hope to do so before long. It is a great pleasure to have him here.

Dr. J. N. Brown (Washington).

I believe the boll weevil has done more to reduce malaria in Louisiana than any other agent. Prior to the advent of the boll weevil in our State the cotton stalks grew very high and in our bayous there was very rank growth.

The damp ground underneath furnished ideal breeding places for mosquitoes.

In the evening you could not stay in the cotton fields because of the mosquitoes. Since we have the boll weevil, we plant a variety of cotton that produces smaller stalks and plant it earlier and gather it earlier and destroy the stalks, to get rid of the boll weevil; we have also cleaned up the bayous and put drains on the premises, thereby destroying the breeding places for mosquitoes and now you can go into the cotton fields and not be bitten by mosquitoes.

I would like to ask Dr. Barber one question. Why is it that the hemorrhagic form of malaria, or the comatose form, is prevalent in parishes of Natchitoches and Red River, and seldom seen here in St. Landry's? I have been practicing here seventeen years and I have seen six cases of hemorrhagic malaria in that time, while when I was in northern Louisiana I used to see case after case. In my father's practice of medicine he had hundreds of cases of hemorrhagic malaria. To any physician who has not treated hemorrhagic malaria, let me say do not give your patient quinine; if you do it will kill him. I suppose you are familiar with the comatose type of malaria. That is simply a case of chronic malaria that is up and walking about, and suddenly falls over in a comatose condition, and it may be five or six days before you can wake him up. If you get him when his pulse is still fairly good you can help him with quinine; but do not give quinine to the hemorrhagic cases.

Dr. M. A. Barber (closing):

In our surveys of the Seventh Congressional District we have not visited every parish, but it is probable that the area covered is fairly representative of the whole district.

I did not wish to say anything in the paper which would discourage anti-mosquito measures; I only wished to emphasize that even where *Anopheles* persist in large numbers much can be done to diminish malaria.

As regards the relation between mosquitoes and boll weevil:

Dr. Henry Thibault of Scott, Arkansas, recently wrote me that there seemed to be a reduction of mosquitoes and malaria in his district as the result of the repeated use of calcium arsenate in dusting cotton. While less effective than Paris green, calcium arsenate is more or less destructive to *Anopheles* larvae.

Since I am not a physician I cannot speak authoritatively regarding comatose and hemorrhagic forms of malaria. However, I have had opportunity of seeing many cases of the more severe types of malaria in several

malarious countries, the Malay States, the Philippines and Central America. The incidence of such types of malaria seems to be high where the general malaria rate is high. In southern Russia many cases of the more severe type of malaria have occurred in association with the recent epidemic there.

#### EXTRA UTERINE PREGNANCY.\*

O. P. DALY, M.D.,

LAFAYETTE, LA.

By the term ectopic, or Extra Uterine gestation, is meant the implantation and development, to a greater or lesser extent, of a fecundated ovum in any location outside of the uterus. Owing to the fact that the ovum may be implanted in any one of several different locations, we recognize three varieties of ectopic gestation, classified as to location—namely: tubal pregnancy, which is by far the most frequent; in fact, Ashton<sup>1</sup> goes so far as to state that, "From a practical standpoint we may regard all cases of Ectopic Gestation as of tubal origin." Whether we agree with this broad statement or not, nevertheless it is certain that the vast majority of all cases of Ectopic Gestation are tubal. Tubal pregnancies are classified further as Cornual or Interstitial, where the ovum is implanted in that portion of the tube which penetrates the Uterine wall. This is the rarest form of tubal pregnancy; Isthmial pregnancy, where the development takes place within the tube at any point between the Uterus and the Ampulla; and last, as Ampullar pregnancy, where the development takes place within the Ampulla of the tube. Ovarian Pregnancy, which is very rare, occurs where the development takes place within some portion of the Ovary; Abdominal Pregnancy, where the foetus, or embryo, develops some place within the abdomen. This form, for all practical purposes, may be recognized as being secondary either to a Tubal or an Ovarian Pregnancy.

Again, we speak of primary and secondary Extra Uterine Pregnancy; the former applying to the site of the original implantation, and the latter to the new position assumed by the fecundated ovum after rupture of a primary Tubal or Ovarian Pregnancy and implantation at some other point.

The cause of Extra Uterine Preg-

nancy, broadly stated, is some interference with the downward progress of the fertilized ovum which is prevented from entering the Uterine cavity, hence becomes embedded and develops into one of the forms previously referred to.

Arey<sup>2</sup>, in a very interesting article, calls attention to the difference in the average age of child-birth in the United States, as given by the Census Bureau, which was 26.5 years, and the average age of 88 women who developed extra uterine pregnancies, which was 31 years, or 4.5 years later. Again he calls attention to the fact that three-fourths of women who develop extra uterine pregnancies are already mothers; but, and very significant is the fact, there was a sterile period between the last pregnancy or abortion; or in those cases who have never borne children, between marriage and the development of the Extra Uterine Pregnancy, of nearly six years. He also found that a history of previous abortions was common. These findings are explained by the theory of previous inflammation in the tubes. Mall<sup>3</sup>, in a study of specimens of Tubal Pregnancies, in the Carnegie collection, arrives at the conclusion that tubal inflammation is the chief factor in tubal gestation. This inflammation being of such a character as not to prevent the upward passage of the active spermatozoon; but obstructing the return of the fertilized ovum. This inflammatory process may, for a variable period, prevent conception at all, and later on subside to such an extent as to allow the situation above described to occur. Mall<sup>4</sup> thus accounts for the sterile period so frequently observed in these cases.

While inflammation of the tube itself is regarded as being the most frequent cause, inflammation without the tube may also be a cause through the formation of adhesions and the consequent kinking or distortion of the tube, causing obstruction of its lumen. Tumors, either within the tube wall or arising from other structures, may, by pressure, narrow the lumen of the tube (Crossen<sup>5</sup>) and be an etiological factor in Ectopic Gestation. Congenital malformations, such as Diverticula, accessory ostia, and persistence within the tube of the normal spiral twists of the foetal type, must also be borne in mind. Polak<sup>6</sup> reports three cases developing in the

stump of an amputated tube, and eight cases in an angulation of the tube, caused by a Gillian or Baldy-Webster round ligament suspension.

There are three commonly accepted theories of Ovarian Pregnancy—first, the Graffian follicle is entered through a small opening by the spermatozoon, before the discharge of the ovum. This opening may or may not close (Norris<sup>7</sup>). Second, the spermatozoon may enter an old ruptured follicle into which another follicle ruptures, and there fertilize the ovum of the latter. Sutton<sup>8</sup> adds a third theory, that an Ovarian Pregnancy may have been primarily a Tubal Pregnancy which was aborted into the ovary. Ovarian Pregnancy is very rare. Sutton, after reviewing the literature of these cases, finds a total of seventy-two cases reported from 1909 to 1922, of which he accepts only forty-seven as fulfilling the necessary requirements as laid down by Spiegelberg in 1887, namely: first, the tube on the side of the pregnancy must be intact; second, the foetal sac must occupy the position of the ovary; third, the ovary must be connected with the uterus by the Utero-Ovarian ligament; fourth, definite ovarian tissue must be found in the wall of the sac.

Abdominal Pregnancy, as previously stated, is regarded as being always secondary to some other form.

When it comes to the early diagnosis of Extra Uterine Pregnancy we medical men must confess we are still a long ways from being able to claim any great skill in recognizing this condition in its earlier stages; but in the great majority of cases must ignobly wait until nature sounds a signal of danger, in the shape of a hemorrhage, before we are able to arrive at a conclusion and tell our patients just what the trouble is; and even then, we often find no easy task confronting us. Possibly we may be able to cover up some of our inability to make diagnosis in the early stages by the plea that in the great majority of cases we are not consulted by our patients until a rupture or hemorrhage, with its accompanying pain and shock, has taken place. This is true, but still we must admit that Extra Uterine Pregnancy, before the rupture, is one of the most difficult conditions which we have to diagnose.

In a short paper, such as this must

be, I will necessarily have to refer very briefly to those diagnostic signs and symptoms upon which we base our diagnosis of this condition. First in consideration is a history of a missed menstrual period, not always constant by any means, and ranging from a complete miss of one or more periods to a simple delay of a few days or weeks, followed by a sudden severe pain in the pelvis, often sufficient to confine the patient to bed, and a bloody vaginal discharge, which the patient usually thinks is a return of her delayed menstruation; but, unlike menstruation, this discharge often is irregular and persists for a week or so. The finding of a Uterine Decidua, or a history of its presence, is often an invaluable diagnostic aid. Along with this menstrual history we may find that the breasts are tender and somewhat enlarged—gastric disturbances may be marked, and morning nausea complained of to quite an extent. The temperature in this condition is variable; in early cases a low fever curve is seen or else the temperature is normal. Following rupture, the temperature is almost always slightly elevated, running from ninety-nine to a hundred and two. This comparatively low temperature is one of the differentiating points between this condition and the various inflammatory conditions which often confuse us, such as Salpingitis, Appendicitis, etc. Upon vaginal examination we may find the blue vagina, but not often. The Cervix is softened and the Uterus somewhat enlarged, in about half the cases; but that which is most noticeable is a palpable mass at the site of one tube, and this mass is always tender.

It is to be hoped that some day we may find some test such as the Abderhalden reaction, which will help us to clear up these cases; but Smith and Shipley<sup>9</sup> have recently shown that while the natural ferments present in sera are somewhat increased, there is no evidence that a specific ferment exists in pregnancy; and while the Abderhalden reaction was uniformly positive on pregnant women, the large number of positive results on the sera of men and non-pregnant women, proves the test to be of very little value. And now we come to the question of hemorrhage: the exact period as to when we should expect

hemorrhage is somewhat uncertain. Walker<sup>10</sup> states that rupture practically always occurs before the twelfth week; Oastler<sup>11</sup> says that termination of Ectopic Pregnancy usually occurs in about six weeks—later than three months being uncommon. Lewis<sup>12</sup>, in an analysis of eighty cases, found the period of gestation to be as follows: Four weeks in 18; four to twelve weeks in 43; five to six months in 3; at term in 2. For practical purposes we may say that we may usually expect rupture and hemorrhage well within the twelve-week period. Hemorrhage may be anything from small recurrent hemorrhages accompanied by pain, colic and a bloody vaginal discharge, up to the massive hemorrhage which we have all seen and about which there can be very little doubt. These hemorrhages are accompanied by sudden agonizing pain ordinarily followed by nausea and vomiting, pallor, anxiety and restlessness rapidly showing up; and if the hemorrhage is severe enough, syncope, collapse and profound shock rapidly come on. The diagnosis after marked hemorrhage is usually not difficult, as the picture is so striking, that in conjunction with the history, we are usually able to make a correct diagnosis. Rubin<sup>13</sup> has recently called attention to the pain in the shoulders following hemorrhage from ruptured Extra Uterine Pregnancies. This he explains as being caused by the accumulation in the subphrenic spaces of the extravasated blood which finds its way along the lumbar gutters. Thus it follows that rupture of one tube with hemorrhage will give pain in the shoulder of that side and vice versa, unless the hemorrhage is so large as to fill both sides, in which event, of course, there will be pain in both shoulders. In 1919 Cullen<sup>14</sup> called attention to the bluish discoloration of the umbilicus as a diagnostic sign where ruptured Extra Uterine Pregnancy exists. Novak<sup>15</sup> explains this blue belly-button as being due to the absorption of the extravasated blood by the lymphatics of the umbilicus and the subsequent oxidation of the deposited blood pigments. If this is true, a bluish discoloration should indicate a recent hemorrhage, and a greenish yellow one a hemorrhage of some time past.

In so far as the treatment of Ectopic

Gestation is concerned, there is today very little question—namely, operation, preferably by the abdominal route, and removal of the sac or tube down to the uterus. In the earlier stages, when diagnosed, all agree that immediate operation is best. After hemorrhage has begun, there has been some diversity of opinion. Robb, Simpson and Polak were among those who contended that we should wait until the hemorrhage was over and the patient given a chance to react and recuperate before subjecting her to the further ordeal of a laparotomy. But today the consensus of opinion is that delay is too dangerous, and with the aid of intravenous infusion of salt solution, transfusion of citrated or whole blood, or the re-infusion of the free blood which has accumulated within the abdominal cavity, and a quick operation, we give our patients the best chance. It must be borne in mind that no means by which blood pressure is raised should be used except just before, during or following operation, as by thus raising blood pressure we overcome nature's method of stopping hemorrhage and may contribute toward the death of the patient.

Hawks<sup>16</sup> reports a review of eight hundred and twenty-four cases with a hundred and eighty-seven in various degrees of collapse from hemorrhage. Of these one hundred and thirteen were immediately operated on, with a mortality of eight and eight-tenths per cent; of seventy-one cases with postponed operation, the mortality was seventeen per cent. In view of such findings as these, and others, too numerous to mention, we are hardly justified in waiting, but should make it a rule to advise immediate operation in all these cases.

Are we ever justified in advising delay in abdominal section in Extra Uterine Pregnancy? I believe never, when we see a case before the seventh month. In cases after the seventh month, where the mother is doing well, has no bad symptoms, and is in a place where she can be kept under close observation, we may be justified in waiting with the hope that by abdominal section before term, we may be able to obtain a live child. Hayd and Potter<sup>17</sup> have reviewed the available literature and compiled a list of sixty-two authentic cases of Extra Uterine children born alive and liv-

ing thirty days or longer, and the mother surviving.

It will be noted that I have said very little as to the different surgical procedures used in these cases. This paper is too short to even attempt to touch upon the surgery of Extra Uterine Pregnancy, and I must close with the earnest hope that I have called your attention to a very vital problem which seems to be ever increasing and which is often not recognized until too late.

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#### DISCUSSION

Dr. Paul Michinard (New Orleans):

I have some fixed opinions upon this question of tubal gestation, especially as to its etiology. I will give you my reasoning and you may take it for what it is worth.

Do you know that in most cases of tubal gestation the ovum is arrested some distance away from the fimbriated end of the Fallopian tube? Do you know that it requires seven days for the impregnated ovule to travel through the oviduct to the uterine cavity? Do you know also that you rarely find five hen eggs of the same size in the market, and what is an ovum anyhow, but an egg? Why is it not that this obstruction occurs at some part of the Fallopian tube, due to over development of the impregnated ovule? My reason for saying that is that I do not believe salpingitis is the cause. I have operated over 95 cases of tubal gestation, ruptured and unruptured, and I would like any man to show me that any case had salpingitis on the other side. Again, I have operated 1900 cases of salpingitis, and I

want any man to show me a case of unilateral salpingitis. I have never seen it; you may have.

Another thing I would like you to harmonize with salpingitis is this—and I have had several cases—an estapic on one side; twelve months after, normal delivery; twelve months later, tubal gestation on the other side. How often have we seen cases of tubal gestation associated with uterine gestation?

From a scientific standpoint I am tired of hearing men say that every salpingitis is due to gonorrhoea. I am tired hearing men say that every case of tubal gestation is due to gonorrhoea. I think our young men should be taught that this is not true.

Dr. J. T. Nix (New Orleans):

Dr. Daley's paper brings back to me the days when I was an interne with him. At that time the diagnosis of extra-uterine pregnancy was comparatively uncommon. I do not think I saw more than eight or ten cases during my days as interne. On the other hand, I believed we all agree that extra-uterine pregnancy is not such an uncommon condition as we then thought.

Several points Dr. Daley brought out should be emphasized. We should not wait until the patient is bled to death before we make a diagnosis. I do not believe we should wait until we have tumor formation, because sometimes you can have extra-uterine pregnancy without a palpable mass in the abdomen. I have had cases where there were symptoms of early hemorrhage, but no tumor formation. The woman had missed her menses two weeks previous. I hesitated to make a diagnosis of extra-uterine pregnancy, but there was evidently some acute intra-abdominal condition, symptoms of peritonitis and hemorrhage. Operation revealed a ruptured extra-uterine pregnancy of about two weeks' duration.

I have had some other experiences that would be in keeping with Dr. Michinard's statement that extra uterine pregnancy does not always follow salpingitis, but could be caused by an enlarged ovum. I have had two cases where extra uterine pregnancy occurred on one side with rupture, and about three years later there was extra uterine pregnancy in the same patient on the other side.

Dr. Lucien A. Ledoux (New Orleans):

I wish to mention two experiences with different types of extra uterine pregnancy, one relating to the early form and one to the later. I have seen several cases of the early form exemplified as follows, multipara, child-bearing period, pregnant three months. She had had an abortion, a doctor called, and it was decided she needed a curettage. She was curetted and sent home and for seven weeks following she continued to bleed. Finally she was seen in consultation and examined under an anaesthetic and on the right side a mass was found and the diagnosis of right tubal pregnancy made.

She was immediately operated on and the symptoms cleared up. The point I want to make is that we have to be careful in cases of supposed abortion that we are not dealing with an extra uterine pregnancy.

As regards the late types, in the last twelve months I have had three cases of full term extra-uterine pregnancy. Two cases were ruptured tubal pregnancies and the other was found to be a primary ovarian pregnancy on the left side. The diagnosis was made before operation, hinging entirely on the finding of the uterine body separate from the abdominal ovoid mass. In both cases of tubal rupture we delivered a viable foetus; in the case of the ovarian pregnancy there were no foetal heart sounds or viable movements. The principal symptoms in these patients were persistent nausea and vomiting. When these patients were operated on they were found to have the omentum covering the anterior surface of the ovoid mass, and in addition to that the structure in the two right tubal pregnancies showed the rupture to have occurred in the middle portion of the tube. In the case of Ovarian Pregnancy the patient was sent to the hospital because she had not delivered after being twelve months pregnant.

Dr. W. P. Bradburn (New Orleans):

One point that I think will help us to differentiate a ruptured tubal pregnancy is the blood count. I know of no condition that will produce as rapid increase in total leukocyte count and polymorphonuclears as hemorrhage within the abdomen. A case in point—in which diagnosis was made of ruptured tubal pregnancy. The woman fainted when she came into the office. Dr. Bass made the blood count and the patient was immediately operated, largely upon the blood count. The patient had been taken sick suddenly at home with pain in the region of the lower right chest.

One other point, in a case of delayed rupture where we have a little hemorrhage, the blood count is generally lower, varying as to the periods of leakage rising during those periods.

Your blood count and laboratory work will frequently help you out of an embarrassing situation.

Dr. T. J. Fleming (Mansfield):

I always feel that an extra uterine pregnancy is associated with salpingitis. I had one case that I saw after another doctor had diagnosed it as appendicitis. When I saw her, the temperature was 104 degrees, with marked abdominal rigidity and all other symptoms of a surgical abdomen. The blood count was about 30,000 leukocytes. I operated, and the first thing was a lot of old, clotted blood; then I knew I had a ruptured tubal pregnancy. I found a foetus of about eight weeks duration. After I got that cleared up I looked on the other side and found a pus tube. I removed that and the patient made an uneventful recovery. But after hearing Dr. Michinard



I think that could be explained by being an old salpingitis on the left side. Likely the other tube had cleared up of its inflammation and pregnancy took place in the good tube. I think this case is interesting—pus tube on one side and a ruptured tubal pregnancy on the other.

Dr. O. P. Daley (closing).

In answer to Dr. Michinard, I will state that is a very interesting idea he has advanced and I think is worthy of a great deal of thought. However, when he states that he does not believe that salpingitis is a cause of extra uterine pregnancy, I believe he is taking that stand against a very select array of people who do believe it, and I do not think we can cast it out.

I want to express my appreciation to Dr. Nix for his kind comment.

Dr. Ledoux's cases were very interesting. We have found very few full term cases in the literature.

Dr. Bradburn spoke of the blood count; we have not found such a high blood count in these cases.

Someone spoke about abortion. I want to report one case that was taken to the city by her husband to have her tonsils removed. This was done, and the following day she developed uterine hemorrhage, an examination was made with a diagnosis of incomplete abortion. A curettage was done and the uterine cavity emptied. She came back home still losing some blood, and the day after she had a ruptured tubal pregnancy. Dr. Pavy saw the case and we operated that same day. Whether there was an abortion there or the extra uterine pregnancy was mistaken for abortion, I cannot say.

## SYPHILIS OF THE STOMACH

### With Report of Cases

DOUGLAS L. KERLIN, M.D.,

AND

WILLIAM B. RAWLS, M.D.,

SHREVEPORT, LA.

Organic gastric syphilis is rare even in advanced cases of systemic syphilis, if one is to judge the incidence by the number of reports of cases in the literature. In all the literature there are only about sixteen cases anatomically proved. The number reported with diagnosis based on clinical or serological evidence is only about two hundred and fifty cases. This rarity however may be more apparent than real for the reason that at the operating table or at the post mortem room the condition may be easily mistaken for carcinoma or old calloused ulcer of the stomach. According to the literature the average age of incidence is between thirty five and

forty years, the average duration of symptoms about two years; exclusive of the patients with hereditary syphilis and the advanced obstructive hour-glass type, cachexia is rare, anemia is not marked and a gastric tumor is not palpable. In contrast the average age of the patient with chronic benign ulcer is forty-five years with symptoms on the average of ten years; while the patients with cancer average fifty-four years with symptoms of two years duration; cachexia and anemia are marked and a gastric tumor is usually palpable.

There is no symptomatology characteristic of the lesion and the variations in the clinical picture depend largely on the site and the extent of the involvement. According to Bensaude there are four types. ulcerative, tumefactive,

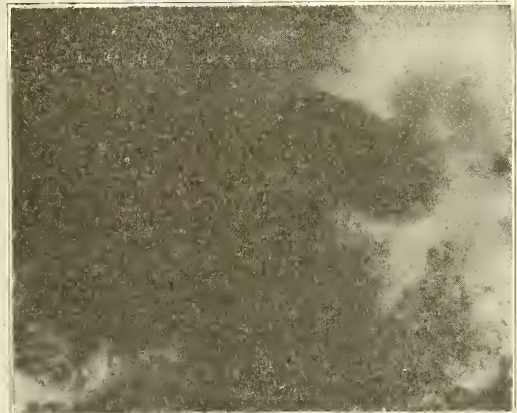


Fig 1—Showing the contraction in the pars-media of the stomach. (Case No. I.)

linitis and stenosing type. The nature of the underlying pathology will determine the type and the resulting symptoms. Localized involvement of the pylorus with or without stenosis, and with free hydrochloric acid and enzymes in the gastric secretion, may simulate benign pyloric ulcer; in obstructing hour-glass conditions the patients usually have considerable pain and vomiting soon after taking food. In the contracted and deformed types there are distress, pain and symptoms in proportion to the nature and amount of food taken. The clinical picture presented resembles the slowly progressive form of scirrhus carcinoma, more than any other disease. The symptoms common to all cases are a progressive course, pain, nausea and vomiting soon after eating, absence of hemorrhage, maintenance



Fig. 2—Showing thickening and irregularity of walls of stomach. (Case No. II.)

of appetite in most cases and a marked loss of weight without cachexia. The pathologic anatomic process is a progressive one, rarely circumscribed and involving the lower and middle thirds of the stomach in the majority of cases with extension upwards along the lesser curvature. Carman states that although the Roentgen signs of gastric syphilis are not clear cut and pathognomonic in every case, they furnish decisive evidence of gastric involvement and in correlation with the clinical and laboratory findings give valuable aid in the diagnosis of the disease. According to Carman the roentgenologic signs of gastric syphilis are:

(a) a filling defect of the gastric outline, usually without corresponding palpable mass,

(b) hour-glass stomach or the upper loculus expanded and bulbous and the lower portion tubular due to the extensive concentric contraction,

(c) six hour retention is less frequent than in other gastric lesions (20 per cent),

(d) diminution of capacity, stiffening or lessened pliability of the gastric wall,

(e) absence of peristalsis of the involved area,

(f) patient usually under the cancer age and is not ill in proportion to the disease as is shown by the Roentgen ray,

(g) pylorus free rather than obstructed,

(h) an absence of niche, accessory pocket or typical incisura and the classical signs of gastric ulcer.

The proof of the specificity of the lesion involves numerous factors. The requisites are:

(a) demonstrable evidence of a gastric lesion,

(b) positive Wasserman reaction, or other reliable evidence of syphilis elsewhere in the body or both,

(c) a definite sustained therapeutic improvement.

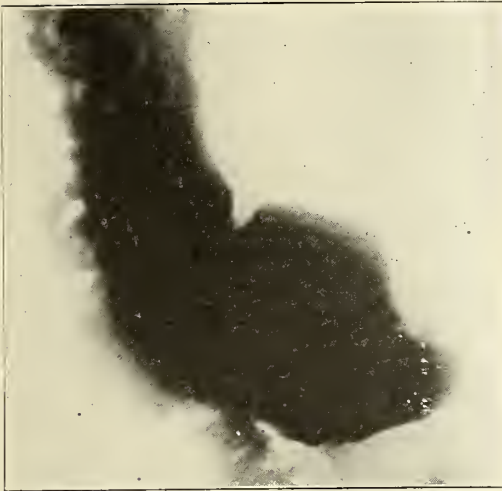
These factors in conjunction with achylia or sub-acidity in the majority of cases, with the roentgenologic characteristics described in addition to the anatomical improvement or cure, seem to make the clinical diagnosis of syphilis of the stomach conclusive.

Case 1. (Hospital No. 160414) S. R. Colored male, age 21 years, unmarried, admitted to Shreveport Charity Hospital September 3rd 1923. Family and past history unimportant except for gonorrhoea six years ago. No history of primary lesion. He was well until June 1923 when he began to complain of dull aching pain in the epigastrium, heart burn, nausea and sometimes vomiting. Pain present at all times made worse by eating and relieved by vomiting. No hematemesis or blood in the stools. Pain, nausea and vomiting gradually increased and when the patient was admitted to the hospital he complained of, (a) pain in the epigastrium, dull and dragging in character, (b) nausea and vomiting regardless of whether liquids or solids were taken, (c) heartburn, (d) marked loss of weight. Vomitus was bitter and often light green in color.

Physical examination showed colored male very emaciated. Heart lungs and deep reflexes apparently normal. Tenderness on palpation in the epigastrium but no tumor was felt; liver was enlarged about three cm below the costal margin in the mid-clavicular line. Urine was negative. Examination of the stomach contents removed one hour after Ewald test meal showed residue 100 c.c, free hydrochloric acid 6, total acidity 15, lactic acid and blood negative Blood Wasserman: acetone antigen 3 plus, cholesterinized antigen 4 plus. Spinal fluid: Wasserman negative, cell count 2, globulin negative. \*X-ray examination on September the 4th (Figures 1, 2, and 3) showed, "an area of infiltration and contraction in the pars-media of the stomach about two inches in length with about 25 per cent residue at the end of six hours, condition



Fig. 3—After having received five injections of neo-arsphenamine. (Case No. II.)



Case No. 4—Before treatment showing the irregular outline at the old enterostomy opening and at the pylorus. (Case No. III.)

answers to that of scirrhus carcinoma or syphilis." Another \*X-ray examination on September the 20th showed defect as above noted. On October the 6th after having received eight injections of neo-arsphenamine patient signed release and left the hospital. At that time he was entirely free from clinical symptoms and had gained thirty three pounds in weight. A follow up on November the 5th showed patient working every day, free from clinical symptoms and still gaining weight.

Case No. 11. (Hospital No. 159619). J. W. Colored male, age 25 years, admitted to Shreveport Charity Hospital June the 28th 1923. Family and past history unimportant except for gonorrhoea in August 1922 with primary lesion on the penis at the same time. About May the 10th. 1923 he began to complain of severe pain in the region of the umbilicus, with nausea and vomiting. Pain at that time came on about five or ten minutes after eating and was usually accompanied by nausea. Vomiting occurred after ingestion of a large meal but only about three or four times a week. Pain not relieved by alkalies. Pain, nausea and vomiting gradually increased until patient entered hospital, when the pain was constant, made worse by eating and always accompanied by nausea and vomiting. Vomiting usually occurred about thirty minutes after ingestion of food. Pain not relieved by alkalies but sometimes by vomiting. Marked loss of weight; no hematemesis or blood in the stools, bowels regular once daily.

Physical examination showed poorly developed emaciated colored male. Pupillary and deep reflexes normal. Heart and lungs apparently normal. There was tenderness on palpation over the region of the umbilicus but no tumor could be felt. Liver enlarged about five cm. below the costal margin in the mid-clavicular line. Urine showed small amount of albumin with a moderate amount of pus. Ewald test meal removed one hour after ingestion showed residue 150 cc, free hydrochloric acid C, total acidity 10, blood moderate amount, lactic acid negative. Blood Wasserman: acetone antigen 4 plus, cholesterinized antigen 4 plus. Spinal fluid: Wasserman

negative, cell count, 4; globulin negative. \*Radiographic examination of the stomach, (Fig. No. 4) showed, "a rigidity and thickening with irregularity of the walls of the stomach extending back to the pars-media, also involving the pylorus and duodenal cap: the character of the shadow seen in this case is strongly suggestive of syphilis or scirrhus carcinoma." From July the 5th to July the 23rd he received five injections of neo-arsphenamine of 6 gms. each; on July the 19th the blood Wasserman was still 4 plus. On July the 21st another \*radiographic examination, (Fig. No. 5) showed, "a contraction of the pars-media; the main bed of the stomach appears less contracted and infiltrated than in the previous examination." On July the 23rd the patient signed a release and left the hospital at which time he was entirely free from clinical symptoms.

Case No. III. (Hospital No. 159794). B. N. Colored male, age 26 years, admitted to Shreveport Charity Hospital July the 12th 1923. Family and past history unimportant except for gonorrhoea three years ago, no history of chancre or chancroid. Eruption on body about six months ago which he says was pronounced chicken pox. Patient dates present illness from a specific instance in June, 1919, when, while eating dinner, food tasted sour, quit eating, drank some water and a few minutes later he vomited a sour green fluid. Pain gradually became worse, relieved by eating, but eating was followed by nausea and occasionally by vomiting. Pain was present all the time and was partially relieved by alkalies. The pain, nausea and vomiting finally became so severe that in May, 1921, the patient entered the hospital. Operative note at that time was as follows: "Appendix in sub-acute stage, stomach distended and full of gas; hard induration about size of nickel in the pylorus, also induration of the lower end of the stomach with many adhesions, mesenteric lymph glands enlarged, gall bladder normal. Appendectomy and classical posterior gastro-enterostomy were done." Following the above operation the symptoms were partially relieved and patient was discharged about fourteen days after operation. About one month after discharge the above symptoms again returned as before and were present at all times. Pain, nausea,



Fig. 5—Six-hour plate showing large residue with defect as in Fig. No. 8. (Case No. IV.)

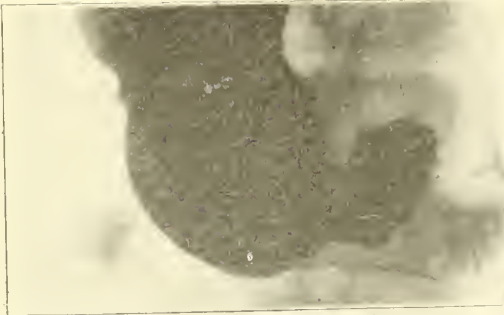


Fig. 6—Showing improvement after having received six injections of neo-arsphenamine. (Case No. IV.)

and vomiting gradually became worse and were accompanied by so marked loss of weight that about two weeks before entrance to the hospital he was forced to go to bed from weakness, at which time he began to pass black tarry stools. On entrance to the hospital he complained of (a) weakness and loss of weight, (b) pain in the stomach, nausea and vomiting so severe that he refused all except liquid foods.

Physical examination revealed colored male very emaciated. Pupillary reflexes apparently normal. Knee reflexes present, but sluggish. Epitrochlear and posterior cervical lymph glands enlarged, heart and lungs apparently normal; tenderness on palpation in the epigastrium, but no tumor felt; liver and spleen apparently normal to palpation and percussion. Urine was negative. Examination of the stomach contents removed one hour after Ewald test meal showed residue: 75 cc.; free hydrochloric acid 0, total acidity 22, occult blood large amount, lactic acid negative. Blood Wasserman: acetone antigen 4 plus; cholesterinized antigen 4 plus. On July the 20th, \*radiographic examination of the stomach (Fig. No. 6) showed, "an irregular filling defect at the pylorus; the meal is passing through the enterostomy opening which is very irregular in outline suggesting possible ulceration at this point as well as at the pylorus." On August the 25th another \*radiographic examination of the stomach (Fig. No. 7) showed, "some improvement in the old enterostomy opening with the edges appearing more smooth than in the previous plates." On September the 10th, another \*radiographic examination "shows still further improvement over that of August the 25th." On September the 10th patient was discharged after having received twelve injections of neo-arsphenamine, at which time he was free from all clinical symptoms and had gained considerable weight. Patient returned to the hospital three months later and was still free from clinical symptoms, \*radiographic examination showed "meal passing freely through the enterostomy opening, no morphological defects noted."

**Case No. IV.** (Hospital No. 161023). L. W. Colored male, age 40 years, admitted to Shreveport Charity Hospital November the 18th, 1923. Family and past history unimportant, except for primary lesion on the penis two years ago. Patient dates present symptoms from May, 1923, at which time he began to complain of nausea and burning pain

in the stomach. Pain was not present all the time, relieved by alkalies, but made worse by eating. Pain and nausea gradually increased until it was present all the time and accompanied by occasional vomiting, constipation and loss of weight. On entrance to the hospital the pain was so severe that he refused to take any food except liquids. At no time was there any hematemesis, bloody or tarry stools.

Physical examination showed an emaciated colored male; heart, lungs and deep reflexes apparently normal. There was tenderness on palpation in the epigastrium, but no tumor felt; liver and spleen apparently normal to palpation and percussion. Urine was negative. Examination of the stomach contents removed one hour after Ewald test meal showed residue 130 cc., free hydrochloric acid 4.5, total acidity 8; lactic acid and blood negative. Blood Wasserman: acetone antigen 4 plus; cholesterinized antigen 4 plus. Spinal fluid: Wasserman negative, cell count 4, globulin negative. \*Radiographic examination of the stomach (Figures Nos. 8 & 9) \*showed "small annular defect in the pars-media with a small isthmus of barium connecting the pars-media with the pre-pyloric area; the defect is constant, appearing on all the plates and is tender to direct touch; six hour observation shows the stomach with a large residue, the above defect being very prominent; conclusions, gastric ulcer." Another \*radiographic examination on December the 15th (Fig. No. 10) showed "apparently normal stomach; as compared to the previous examination, the pre-pyloric defect is not apparent." The patient left the hospital on December the 15th; at which time he was free from clinical symptoms and had gained fifteen pounds in weight. He returned again on January the 1st, 1924, was still free from clinical symptoms and the \*X-ray examination again showed negative for any morphological defects.

**Case No. V.** (Hospital No. 161564). S. S. Colored male, age 27 years, unmarried, admitted to Shreveport Charity Hospital December the 2nd, 1923. Family and past history unimportant. Was well until August, 1923, when he began to complain of a heaviness and a sense of uneasiness in the epigastrium. This continued and gradually grew worse for about two months, pain then becoming very severe, made worse by eating so that patient practically remained on a liquid diet. About one week before entrance to the hospital he vomited for the first time, but since then has vomited frequently. On entrance to the hospital he complained of severe pain in the epigastrium, present at all times, made worse by ingestion of either liquids or solids, nausea and vomiting and loss of weight.



Fig. 7—Showing rigidity and contraction of stomach. (Case No. V.)

Physical examination revealed colored male fairly well developed, but emaciated. Heart and lungs apparently normal. There was tenderness on palpation in the epigastrium, but no tumor could be felt. Liver and spleen apparently normal to palpation and percussion. Urine was negative. Examination of the stomach contents removed one hour after Ewald test meal showed residue 80 cc., free hydrochloric acid 2.5; total acidity 4.5; lactic acid and blood negative. Blood Wasserman; acetone antigen 4 plus; cholesterinized antigen 4 plus. Spinal fluid: Wasserman negative, cell count 4, globulin negative. \*Radiographic examination of the stomach (Fig. No. 11) showed, "stomach lying transversely high in the abdomen; the whole of the stomach is immobile and fixed: it appears hard and fixed through the pars-media and pre-pyloric area, condition found in the stomach suggestive of syphilis or scirrhus carcinoma." After having received four injections of neo-arsphenamine, on December the 24th, he signed release and left the hospital, at which time he was free from all clinical symptoms and had gained considerable weight. On February 2nd, 1924, he again returned to the hospital, was still free from clinical symptoms and still gaining in weight. \*Radiographic examina-



Fig. 8—Showing improvement after having received four injections of neo-arsphenamine. (Case No. V.)

tion (Fig. No. 12) showed, "the same condition as on previous examination, but the stomach appears somewhat less contracted and infiltrated."

*Treatment.*—This consisted of neo-arsphenamine grains .6 intravenously every five days, potassium iodide grains 15 three times daily and mercury rubs of one-half dram unguentum hydrargyri daily. No dietary treatment was followed.

*Conclusions:* 1. While the symptomatology of gastric syphilis is of a varying character, the X-ray, chemical and serological findings will usually furnish a basis for a definite diagnosis.

2. The patient is usually under the carcinoma age and the symptoms may extend over a period of years.

3. Under intensive anti-luetic treatment the clinical symptoms rapidly disappear, and there is evidence of anatomical improvement and the prognosis is good.

4. That surgery is not indicated until

a prolonged course of intensive anti-luetic treatment has failed.

5. In any case of prolonged gastric disturbance with other evidence of luetic infection a definite therapeutic test is justified before resort to surgery.

\*Dr. S. C. Barrow, visiting Radiologist.

## SOME OBSERVATIONS ON A NEW ANESTHETIC GAS.\*

J. T. HALSEY, M.D.,  
CHAPMAN REYNOLDS  
AND  
HAROLD B. COOK.  
NEW ORLEANS.

About thirty years ago Hans Meyer, as a result of experimentation and observation during a period of several years, felt himself justified in making the following statements: An otherwise indifferent substance if sufficiently soluble in water and also in lipoids will exert an anesthetic action in the body. Further in the case of chemically similar substances those whose solubility in lipoids as compared with their solubility in water is the greater will exert the more powerful anesthetic action.

Several months ago Dr. McMechin, Sec'y of the American Society of Anesthetists, suggested to one of us (J. T. H.) that we investigate the anesthetic properties of the other members of the ethylene series. A consideration of the chemical and physical properties of Propylene, the next higher member of this group, led us to believe that this substance would probably prove to be a more powerful narcotic than ethylene and probably also that it would possess certain advantages over ethylene. Passing over many details and omitting a discussion of difficulties encountered and obstacles overcome, we will make a long story short by the brief statement that we are able tonight to report that the work done in our laboratory during the past three months has confirmed this conclusion. The partition of coefficient between oil and water of Propylene is about three times as favorable as that of Ethylene and the Propylene which we have manufactured is about three times as powerful an anesthetic as is Ethylene. This statement is based on a large

\*Read before Orleans Parish Medical Society, May 26, 1924.

number (over eighty) of observations on animals as well as on quantitative determinations of the chemical and physical factors.

We have good grounds for believing that our gas, while composed mainly of Propylene, contains other substances. Therefore, it is possible that its anesthetic powers are due to these containments. We believe, however (and this belief is based both on theoretical considerations and on various observations) that our gas owes its anesthetic action to Propylene and that certain toxic actions are due to these impurities. Even with this impure gas the margin of safety seems to be sufficiently wide. The poorest lot of gas prepared by us shows a margin of over 60 per cent, the best lot one of over 115 per cent.

Biologic tests and physical and chemical theory show extraordinarily accurate agreement, and we believe that more numerous experiments on animals will soon justify testing out this gas on human beings. These investigations will be made as soon as we secure enough of sufficiently pure Propylene, and one of the big oil companies has promised to supply it. We hope ere long to be able to report to you the clinical results.

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#### ORAL DIAGNOSIS.\*

HAIDEE WEEKS GUTHRIE, D.D.S.,  
NEW ORLEANS.

Dentistry has indeed advanced far from its earlier beginnings where the dentist was one who, through a technic based largely on physical strength, occupied himself with extractions as a "side-line" to some other vocation. No longer is the dentist a blacksmith, a barber or a watchmaker who had developed a particular facility for dental operations. We have seen dentistry grow to a specialty of medicine, and, like some other specialists of medicine, further develop its own specialties. The establishment of these marks of progress have been made possible as the profession has seen fit to make use of researches in anatomy, physiology, bacteriology, and pathology which have been contributed to the science of medicine.

Never before has there been such a

call on the dentist for help in medicine as there is today. To the honor of our profession be it said that never before have we been able to give this help so efficiently as today. The physician is becoming acquainted with the work of our masters and we dentists are becoming more alive to the medical aspect of the work we do.

One of the dangers which confronts everyone in a specialty is that he comes to see only the special field in which he works and forgets for the moment its relationship to the patient. Mouth conditions must be viewed in respect to the influence on general health and in respect to the effect of general health upon them.

Our responsibility grows as the demands of general medical and surgical diagnosis are increased. In this field, as in other fields of medicine, a very large part of our effort can be properly directed to diagnosis. Students of medicine sometimes are heard to complain that too much attention is paid to the diagnosis of disease and too little to treatment. They do not realize, in their inexperience, that while reference books may teach them therapeutics, diagnostic skill can only be achieved by years of experience and personal observation, based on thousands of routine examinations and systematically kept records. Oral diagnosis is a specialty of dentistry today.

The oral diagnostician has most of his cases in consultation with the specialists of medicine.

#### *Syphilis.*

In the examination of the patient we are able to determine by classification of conditions the diseases.

Abnormalities of size, shape and color of either the deciduous or the permanent teeth, or of both, may point with very great directness toward the existence of serious general disease at some period previous to the eruption of the tooth. It is often a matter of considerable surprise to the pediatrician to get this information first from the dentist. It often happens that the parent has overlooked this factor in giving the child's history to the medical man.

In the experience of the writer, retarded absorption of the deciduous roots is one of the most important diagnostic

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\*Read before the Orleans Parish Medical Society, April 28, 1924.

factors encountered in the mouth of the child. The explanation of the cause of this, where it exists or when it is found, very often points the way to a positive conclusion regarding a vital abnormality existing in the child's general health.

Whenever delayed absorption is seen to exist a radiograph should be made. A positive Wassermann reaction may be of great help here, in confirming a diagnosis of hereditary syphilis. However, after years of experience, the writer places much more reliance in conditions as she sees them in the child's mouth than upon the laboratory findings. In no department of medicine, not even excepting dermatology, are the indications of existing syphilis more positive. It is before consulting a physician and it is imperative that he, too, be on his guard as to the existence of syphilis in the patient.

Numbers of cases where the positive diagnosis was easy to be made by examination of the mouth, where often clinical signs and laboratory findings were lacking.

The typical picture of a child with a pasty complexion, coarse dry hair, "saddle nose," indifferent to his surroundings, stunted in growth and intellect, would, of course, be recognized by a practitioner, as a patient who was, in all probability, suffering with hereditary syphilis. His lymphatic glands may be enlarged, all of the collar or one set of glands only enlarged. On opening the mouth the ducts are functioning, the opening and closing of the jaw normal. Lower anterior teeth are even, spat-like teeth with the spaces between the teeth as wide or wider than the mesio-distal width of the teeth. An upper labial frenum and box-like upper anteriors are seen. As a rule, in cases of this type, the deciduous molars are large well-shaped teeth. The first permanent molars are in position, a marked fifth cusp on the lingual of the upper permanent molars is seen. The tongue is very red with deep fissures, or the tongue in some cases may not be changed at all. In most cases it is thicker and shows the imprint of the teeth on its edges. Many folds and furrows transverse the surface of the tongue which gives it either a flattened form, or, at the edges, a pulled out and fringed appearance.

The most important and characteristic symptom is a thickening of the epithelium. These thickened epithelial spots, as they spread, assume ring and bow-shaped forms which have a more or less bright red center, sometimes very smooth. Sometimes these plaques are raised above the normal mucous membrane and have a yellowish gray color. Rapid change is particularly characteristic of this condition. Sometimes the rings grow and assume other shapes. Sometimes they disappear for a while. The aspect of the tongue, however, is never normal. These rapid changes in shape and form are more marked in the younger child. The condition lasts during life. When we see a condition of this kind we ask for a Wassermann reaction. It may or may not be positive. A simple geographic tongue with no other evidence is not a sufficient indication of syphilis. To determine this, we must seek further.

Case I. A boy of eight walks into the office, gets into the chair. His height, weight, eyes complexion, stature, carriage are normal. On examination of his mouth, the lips, glands and tissues are normal. His hair has streaks of grey, a slight degree of "saddle nose" is present. The lower right lateral and cuspid are fused. Family history: The maternal grandmother was mentally deficient; the mother has white hair at eighteen; nervous, with bone pains. A diagnosis of arthritis of the spine had been made by the family physician. The child's deciduous teeth had never been sufficiently absorbed so that they could be easily extracted. A Wassermann was made and it was positive. Wassermanns were also made of other members of the family and this boy was the only positive one. However, the mother has been given specific treatment for syphilis and the arthritis has entirely disappeared.

In eleven cases of fused teeth, ten were of the lower anteriors. Only one was on the upper anteriors. Of the eleven patients showing fused teeth nine were proven to be syphilitic. In seven of the cases bone involvement was evident; club foot, "growing pains," arthritis, hip disease, etc. Mental deficiency was frequent.

In one case, mentally defective, there are row five lower incisors. After specific treatment the child is becoming more normal in point of intelligence.

Fused teeth occur quite frequently in the cases which present unmistakable signs of syphilitic disease and the writer

is struck with the fact that in our records, this anomaly occurs usually on the right side and seems confined to the lower lateral and cuspid. We have no explanation to offer for this phenomenon and mention it only in passing. The frequency with which we have seen fused teeth in syphilitic children inclines us to consider them as a sign of no insignificant value in summing up the diagnostic points in a given case. In the fused teeth cases there are always other abnormalities, and malocclusion. If the malocclusion is not noticeable in the deciduous denture, it most probably will develop later.

It is most important in the cases of malocclusion which require treatment to examine the patient for evidence of hereditary syphilis. No matter how well planned from a mechanical standpoint is the effort at restoration, failure will most likely occur through lack of retention. The teeth may be brought into approximately correct position with skillful hands and patience; but the result will not be permanent because of the fact that the looked for retention fails, and the teeth return to the faulty position.

Whenever this occurs, it is imperative to look for evidence of syphilis in the mouth and refer the patient for proper treatment. Indeed it cannot be too strongly emphasized that the dentist sees perhaps the most positive evidences of hereditary syphilis that are presented in any field of medicine, and he must learn to recognize these signs as they appear. This necessity is so obvious that further comment on this point seems useless. An orthodontist may save himself mortification by learning to recognize hereditary syphilis when it is manifested in the mouth, and refusing to undertake orthodontia until treatment of the disease is, at least, well under way. Again we must insist on diagnosis as the fundamental fact in all medical and surgical undertakings.

Many children from seven to eight will present with the four lower incisors and upper  $\frac{1}{2}$  centrals erupted. Around the lower laterals which have erupted out of alignment we will find the **gingival swollen, red and spongy**. The child has been sent from a pediatrician because she is undersized and under

weight. In the mouth with this condition existing, we find an average of five cavities in the deciduous molars. The periodontal membrane and gingival in the region of the deciduous molars is covered with debris, swollen and bleeding on slight pressure. The child's soft tissues are inflamed and give pain in trying to masticate, and, in consequence, the loss of appetite. The child is given a tooth-brush drill; the teeth are scaled; and the cavities filled. The child is then referred to the orthodontist for the correction of the malocclusion. The tissue around the laterals will become normal and the child will quickly gain and be normal in intellect and weight. The pus conditions seen in the gingival of many children are the result of trauma due to malocclusion, and a lack of normal occlusion.

Case II. A man, aged 76, who had been my patient since 1916. The upper jaw edentulous, the lower had the six anterior teeth present. For the upper I made a gold plate, and a lingual bar for lower. The lower anterior teeth had deep pockets and in 1920 they had to be extracted. In March 1920 he developed a marked case of ulcerative stomatitis which on treatment, which included, particularly, a balanced diet, the lesions got well. Every three months he seemed to have a recurrence. In September 1921, he presented on his lips, dorsum of tongue, right and left cheek, bluish grey vesicles which would coalesce, forming larger vesicles. The first were thin and soft, and the underlying mucous membrane would shine through. The patient had developed this condition in the four weeks of my absence and the physician whom he had consulted had pronounced it *Leukoplakia buccalis*. I did not believe the condition *leukoplakia buccalis*, for the patient, though past seventy, is most punctilious in physical examinations, having at least one a year. There were no crevices and ulcerations. We treated with palliative measures using boric acid.

The man had pompholyx on both hands and feet. On his eyebrows was a lesion of ring worm,—also a ring worm on his upper lip about the size of a dime. On consultation with a dermatologist, who gave him a treatment for the pompholyx, which got well; cured his ring worm, and used the same treatment on the suspected *Leukoplakia buccalis*, and we have never had a recurrence.

### *Scurvy*

Patients between the ages of two and six often show a hemorrhagic gingivitis. The gums are swollen, bleed easily, and at times cover the teeth. Ulceration about the neck of the teeth with a dark bluish ulceration on the tissue overlying roots of decayed teeth, is seen. Pre-



quent hemorrhages from the mouth and nose are noted. The patient often will be carried by its mother and placed in the chair, or, will limp into the office. There will be noticed a swelling of the large joints, especially about the knee and ankle, a marked pallor and flabby muscles. There is always a history of bad feeding and usually a lack of diversification of food. The symptoms are immediately improved by anti-scorbutic diet, orange juice, and a thorough cleaning of the mouth. At the first examination we remove all roots and necrotic tissue, and refer to the physician for a general medical diagnosis.

#### *White Decay*

Many of us see in children the recurrence of decay which is sometimes most discouraging. A child will return in eight to ten weeks with two or more cavities, or the enamel is frequently soft enough to be removed with a spoon. We have noted that the saliva in these cases is nearly always viscid. In sixteen cases of white decay, eleven were hypothyroid. One patient had no eyelashes nor eyebrows. On the other hand one was six inches taller than normal, and developed her permanent teeth four years earlier than normal. This last child is seen once a month. Her father, who is a physician, is, of course, quite concerned over her condition. This child has had the same food, care and attention as the other children in the family, (there are five), and yet the softening of the tooth structure is not found in any other member of the family.

This white decay is similar to that we often find in the pregnant woman on the gingival thirds, and in partially erupted third molars. Nursing mothers also at times present these white lines at the gingival margins.

#### *Pyelitis.*

In thirty-six cases referred to me of children suffering from pyelitis, ranging from two to six years, we found that thirty cases had at least two abscessed teeth with necrosis. Two had to have all teeth removed except the first molars. One of the two finally died of starvation.

In the thirty-six cases only five had no pathological oral conditions; excepting that one of the five had the lower

lateral and cuspid fused; and although the Wassermann was negative the family history was poor. The father had died with a gumma of the brain.

#### *Ulcerative Stomatitis and Green Stain*

Many children from sixteen months to nine years will present with a green stain on the gingival. In mouths where there has been no toothbrush used, we will find a heavy moss-like covering from the gingival toward the incisal edge of the teeth, with the darkest olive stain toward the gingival margin. By an application of a disclosing solution the iodine reaction will show the amount of starch in the debris covering the teeth. After scaling, we may cleanse the teeth of everything but the green stain.

In the children where the toothbrush has been used and where we find no debris on the teeth, we may still find the green stain. The stain is no indication of an unclean or an ill-kept mouth. We find it as a well-defined thin line on the buccal, labial, and lingual surfaces on the uppers as well as the lowers. It has been found in families of six children ranging in age from two to twelve years and in father and mother of the family.

The green stain is also found in the mouths of children who have pyelitis. We have never seen a case of pyelitis without this green stain. The green stain is found in the mouths of adults who have well kept mouths and apparently in good health. We have never found the stain however, on artificial dentures, as we often find calculus.

We will find that the child has not a balanced diet who has the stain. If the small child is being given say, the juice of one-half orange a day twice the amount of orange juice will probably prevent the stain. If the older child takes the juice of the one orange a day, that of two oranges will prevent the stain.

In my tests of over three hundred cases showing green stain in both children and adults 95 per cent of the patients could not differentiate between bitter and acid. A child or an adult will not eat or drink something which is distasteful to him. One of my patients on whom I was making these tests told me that he never ate salad, he could not sit at a table if there was vinegar on the

table, so distasteful was it to him as to be nauseating. He could not eat a lemon nor an orange. He could not differentiate between quinine and lemon juice. In the children, the acid is bad tasting, so is quinine, and they cannot make the distinction between sour and bitter. Mothers will say that the baby "spits up" the spoonful of orange juice, but will take the prune juice readily.

Patients in whom we find the green stain usually have a peridental membrane which is red and spongy, and, as a rule, there is a susceptibility to ulcerative stomatitis. Test out the man who had trench mouth in France and who still has a moderate degree of ulcerative stomatitis, and we find that the green stain is there, in association with a lack of vitamin "C" in the diet, and with a distaste for acids,—inability to tell acid from bitter.

In cases of ulcerative stomatitis the juice of one orange or two ounces of orange juice three times a day will many times clear it up in forty-eight hours. At two of our colleges there are a number of patients who at mid-term and final examinations always develop an ulcerative stomatitis, which is cured by orange juice.

In the American Journal of the Diseases of Children, Vol. 26, October 1923, Dr. H. J. Gurstenberger of the Western Reserve University and Lakeside Hospital has an interesting article on "The Etiology and Treatment of Herpetic (aphthous and aphtho-ulcerative) stomatitis labialis." In the conclusion he traces the causes to scorbutic conditions and treatments consist principally of orange juice.

#### *Prevention*

To each case which presents to us we should ask ourselves, if this patient were ours what could we have done to have prevented the conditions we see existing. The carious teeth, the poorly formed teeth, the atrophic conditions of the first molars, the striations on the incisors, or, the tremendous susceptibility of the teeth to decay? All these are real problems which can only be solved by observation and tabulation of large numbers of similar conditions.

Prevention begins with the pregnant mother. She must be seen every six

weeks during the months of pregnancy and her mouth kept clean. We insist on a well-balanced diet. With this necessity emphasized to the mother, she will keep up her own oral hygiene and teach it to the child. Never in my practice, either in my clinics or private practice, have I ever had a patient say anything but encouraging things about oral hygiene at the time of pregnancy. About 60 per cent experience a freedom from nausea when under care, and with a clean mouth. We know by our histology that whatever disturbs the metabolism of the parent disturbs that part of the fetus undergrowing growth at that time. So we are now striving with the pregnant mother in our work of preventive dentistry. The old adage "A tooth for a child" is not alone an adage of my Southland, for many old practitioners in all parts of the country still cling to it. We must co-operate with the medical profession, particularly the obstetricians and have them give our patients the diet necessary to make good healthy teeth in the mouths of our future generations. There is no work which we have not done for the pregnant woman that we have not done for women in any other condition, and we have never had a fatality, nor have any of them had children "born with teeth," which is another superstition. Why would not a mother, who could masticate her food, in a clean comfortable mouth be much better off than one who was in pain? There is no argument there. Her condition of pregnancy is a physiological process, and the diseased condition of her mouth is a pathological one, and must be removed to give her the proper care she should have in order to bring into this world the healthy offspring. From the first week to the third month the pregnant woman often feels so miserably that she neglects her hair, skin, her whole body is neglected, and her teeth of course first.

In conclusion let me ask that you do not think all devitalized teeth are foci for infection and that a bridge is a "Red Lantern of Danger." Many devitalized teeth are as harmless as they were when they were vital teeth. Many teeth covered by a gold crown are vital teeth. We never have an apical alveolar abscess on a vital tooth.

Many radiographs which show dark

shadows at the apex of the teeth, do not warrant the extraction of the teeth, for all shadows do not mean pus. And let us not extract on just one radiograph taken in one position, give the patient the benefit of a thorough diagnosis from all angles.

#### DISCUSSION

Dr. W. A. Lurie:

The subject, of course, is too great for the doctor to take up in 15 minutes. The part which was spoken of, that of oral diagnosis in the child and attention in the case of the pregnant woman, was very well taken up. There is no one who can say but that it is true that attention to mothers during pregnancy assist in the assimilation of food and the proper development of the foetus, as well as the preparation of the child for a more normal existence in its fight for life. It is a subject that would interest the physician, as such, more than the dentist. I refer especially to the diagnosis of the case as it occurs in the mother. Relative to crowns, devitalized and non-vital teeth, etc., as the doctor read in her paper, that subject, perhaps interests medicine today more than the subject of the care of deciduous teeth and the deformities that one does see in them.

In regard to the infections and foci of infection that do develop from bridges, I believe the medical profession is justified in condemning bridges, particularly such as have been in existence in the patient's mouth without observation, for a greater or lesser length of time. It is true crowns can last for a long time. I do not refer to irritation due to malocclusion. Crowns may cause gingivitis which will show a perceptible shadow on the X-Ray picture. Interpretation of that shadow when existing does not always mean the presence of pus, or infection as the doctor pointed out. There is always more or less of a putrid condition of any tooth which has been crowned or supported a bridge for a long time and it is by far better to consider teeth suspicious if crowned, and to have the crowns removed and the teeth tested, than to pass them over without consideration. It may be possible to treat teeth in such condition. The dentist has devised the care for such teeth in his work of to-day. The patient may not have infection but may have a number of non-vital teeth causing irritation and with a poor resistance these may be the cause of some of the symptoms complained of. In such instances these teeth are the ones which should be taken care of. It may be better in these cases to remove such teeth so as to raise the patient's resistance.

The subject of oral diagnosis in just the matter of infections alone would take a long time to discuss. Therefore in closing I want to say just one word to congratulate Dr. Guthrie in the presentation of her paper from the wealth of experience she has had. She has done scientific work in her deductions and conclusions from the records of her work.

\*Read before the Orleans Parish Medical Society, May 12th, 1924.

## PROVISIONAL PROSTHESES AND EARLY WEIGHT BEARING IN AMPUTATIONS OF THE LOWER EXTREMITIES.\*

H. THEODORE SIMON, M.D.,  
NEW ORLEANS.

"When the requirements necessary to conserve the safety of the patient have been met, the sole remaining consideration is to be given to securing the stump which will best meet the demands made upon it by the artificial limb." This, an extract from a manual of Military Orthopedics of the Surgeon General's Office in the late war, cannot be too forcibly placed as the first primary rule of amputations in time of peace.

While amputations justly belong to the surgeon, I do not feel that I am overstepping my bounds by briefly reiterating the demands which the artificial limb make upon the amputated stump of the lower extremity:

First, considering the site of amputation, an old rule and one still adhered to by some surgeons today has been—"amputate at the lowest possible level." This often places the site of amputation at or near the joint line of the ankle or knee, and as the joint mechanism of any prosthesis requires several inches, it results in that segment of the limb being made too long. It would therefore be preferable to amend our rule,— "amputate at a distance above the joint sufficient to allow the necessary room for the joint mechanism." In the thigh amputation, the lower third, within two or three inches of the joint is preferable to disarticulation of the knee for the above mentioned reason. In the leg, the middle third is more favorable than even the lower, as, at this point the tibia is broader and is capable of better end-bearing. In the foot, amputation through the tarsal bones is unsatisfactory, as there is no longer any extensor muscle pull (the peroneal and tibial insertions having been destroyed) which sooner or later results in an equinus position of the stump and an inability to wear any appliance satisfactorily. Amputation through the metatarsal bones anterior to the insertion of the peroneal

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and tibial muscles can be fitted with a useful and comfortable appliance.

Secondly, the type of Amputation: In both provisional and permanent prostheses of the present time it is found that the tuberosity of the ischium is used for weight bearing in amputations of the thigh, and that the shelving upper end of the tibia bears the pressure in below knee amputations. There is however no doubt but that the stump giving end bearing in conjunction with the above described is far preferable in both point of comfort and perfection of ambulation. To secure an end bearing stump, it must be remembered that the method of amputation which will place the scar so as not to be exposed to pressure is essential. The large nerve trunks should be divided high as to avoid future neuromas which are constant sources of uselessness of a stump. The fascia and soft parts should be joined by suture over the bone ends so as to prevent their slipping upward, and so avoid adhesions of skin to bone. The bone should be smoothed perfectly and in leg amputations it should be remembered to cut the fibula higher up than its adjacent tibia. The aperiosteal method of bone division seems to clinically give a better end bearing result. In this method the periosteum is removed for 1 c. m. from the end of the bone and the marrow cavity is curetted out the same distance.

Thirdly, Post Operative care of the Stump is paramount and it is not sufficed by ordinary surgical dressings of the healing wound. Joint contractures must be guarded against from the time of operation, the shorter the stump the more prone to deformities; care must be taken to see that a pillow or cushion is not placed under the knee or used to support thigh stumps. Foot amputations should be placed in a Right Angle Splint. In leg amputations it is advisable to use a posterior gutter splint so as to prevent hamstring contraction. In thigh cases the deformity of abduction and flexion if noticed can be prevented by sand bags and bucks extension. This latter deformity is often the result of posture while patient is up and around in a rolling chair. It can be plainly seen that even a ten degree flexion deformity of the ankle, knee or hip

makes the satisfactory use of a prosthesis impossible. With the contracture is associated a muscle weakness which can in time result in a useless stump. Circulation of the stump is usually far from normal, which results in the inevitable oedema of a greater or lesser degree. This persists, even after complete healing. Baking, massage and a cotton elastic bandage applied to the stump are advisable methods.

For practically the first six months there is an ever progressive change in stump circumference and contour, or, as is called "stump shrinkage." Even after this period, if an appliance is worn, it will be found that there is a second change of contour due to skin thickening, muscle hardening and the like. It is therefore evident that a permanent limb is practically impossible for the first six months and even at a later period with the stump changes, it is often necessary to change the socket which in wooden limbs necessitates making an entire new leg or thigh segment.

This presents an economic feature which is far from trivial in many cases as the cost of a limb ranges around \$150.00. Again, it must be remembered that the period of convalescence of an amputee extends from nine to twelve months by ordinary methods of every day treatment; this from the standpoint of insurance compensation and non-productivity on the part of the patient is of no small importance.

Aside from the standpoint of economy, let us consider the mental status of the patient.—following the loss of a limb there is always a period of profound mental depression. This with no prospectives of further usefulness and an ever present question of "when and how can I walk," can be continued into a state of melancholia and permanent invalidism. What can be more conducive to this than a wheel chair and sick room or even the use of crutches for a period of even six months?

From the foregoing it is seen that a wise aspect of each patient with an amputated limb is first from the physiologic one of the limb itself, and second from an economic and psychologic one of the patient. It was not until the ad-

vent of 1914 and the World War with its numberless maimed and wounded that sufficient thought along these lines was given. It was Froelich of Nancy and Spitzky of Vienna who first conceived the idea of early weight bearing in lower limb amputations. At first the apparatus used were quite crude and were made of only heavy card board and rough wooden uprights—then Martin of La Parne perfected more elaborate apparatus and finally a wide-spread knowledge of the benefits of early weight bearing led to special amputation centers in all of the allied and enemy countries. With the entrance of our Country in the war certain men were sent over to study progress in these cases and among them was Dr. Philip D. Wilson of Boston who in the fall of 1918 was returned to the United States and stationed at Walter Reed General Hospital to conduct this type of work. It was my extreme good fortune to work with Dr. Wilson in the handling of some few of the many amputated cases which passed through this hospital. Here we found that a temporary limb which we called a Provisional Prosthesis could be fitted to a great majority of cases within six weeks from time of amputation, and in some cases where a linear closure of the stump end had been done, it was not infrequent to see a man up and about within three or four weeks after the loss of his limb. Early use of the stump prevented deformity. There was little chance for muscle weakness to develop, the circulation of the stump was markedly improved and the unhealed wounds were found to close much quicker. The skin was begun on its process of hardening almost at once and as the stump shrank a new plaster of paris socket was quickly and cheaply made for replacement. The patient had little time to continue in his depressed mental state. He saw men up and walking, and walking most satisfactorily, and he knew that in a few weeks he would be among them. At the end of six or eight months, after possibly two or three changes of sockets the patient was fitted with a permanent limb with which he could at once walk away with perfect comfort and with more than satisfactory gait.

With but a limited amount of material I am endeavoring to demonstrate at Charity Hospital the advantages of early weight bearing. There is hardly time to go into a detailed description of the making of these appliances. Later, a few lantern slides and a demonstration of the apparatus will be more enlightening. Here it suffices to say that a plaster of paris socket is moulded to the stump and in it is incorporated the wooden or steel uprights which conduct the body weight to the ground from the tibial sides in leg amputations and the ischeal tuberosity in thigh amputations. There is absolutely no end bearing in this type of limb which allows for wearing long before the wound has healed.

In closing, I wish to reiterate that this method of early weight bearing presents two most favorable features for its universal adoption; the first, a reduction by practically one half of the period of convalescence, and, the second, better functional end results.

#### DISCUSSION.

Dr. Hermann B. Gessner: I should like to know whether Dr. Simon can tell from experience the results of the Bunge aperiosteal method. I notice he refers to amputation of the thigh two inches above knee as desirable. I wonder what he thinks of the transcondyloid operation; it gives a broad endbearing surface and does not give leave to the big knuckles of the knee.

I recall reading a few years ago of excision of the fibula in high amputation of the leg. It was claimed that with the fibula removed the tibia stump fits down in the artificial limb better. What can Dr. Simon tell us about this from his experiences.

Dr. E. Denegre Martin: As Dr. Gessner has stated this is an interesting subject. Many of us will recall in years gone by, that amputations were common. When I was in Charity Hospital we had 8 or 10 cases convalescing in one ward. Amputations took anywhere from 6 months to one year to get well and healed often after a good deal of necrosis of bone. In operating on a man, no one thought of an artificial limb; the idea was to save as much of the limb as possible. Prosthesis was not used then. The only operation of the foot that gave a good result was through the metatarsophalangeal joints, operations above this point were often unsatisfactory.

The long stump will always give trouble. About six inches below the tuberosity is best, even three inches below gives good results. The operation that I like very much, especially when people are not able to pay for expensive apparatus, is through the condyle. I prefer the Gritti-Stokes where the patella is

used, this gives a good weight bearing stump. There is no serious objection to the difference in the two legs outside of the fact that there is a little deformity when the man is sitting down. If you have an end bearing stump, you do not necessarily have to have an apparatus of much weight. It is simply laced to the thigh.

We need more of these discussions and demonstrations. When you come down to practical facts, it is the man who goes around with the amputated leg that is serviceable, who is most grateful. With more attention to these little things and more papers and discussions of this kind our meetings would be more interesting and much more instructive. It is the surgeon who expresses his work and not the one who can conceal it that is doing more for poor suffering humanity.

Dr. H. T. Simon (closing): In reply to Dr. Gessner's question relative to the results of the Bunge method of amputation, I called it the periosteal method. I would say from personal experience, not from very recent experience, that we seem to get better end-bearing stumps by using this method of bone division. Even in face of infection we curetted the marrow cavity. It is important though that no more than one centimeter of marrow cavity be removed as any further

removal may result in bone death and sequestra formation.

Relative to the trans condyloid operation in thigh amputation, I would say that there is not quite sufficient room for joint mechanism of the knee of the Prosthesis. I would think that the Gritti Stokes amputation, in which the patella is joined to the cut end of the femur would be very suitable method in this locality. An excision of the fibula in high leg amputation is advocated by most texts. There is however a practical question of the lateral scar, which is necessary for the removal of the fibula, being pressed on by the apparatus. For this reason Mr. Hill, limb maker for McDermott, of New Orleans, prefers the fibula being left in and although we know that the short fibula stump is pulled out by its attached muscles, he advocates gouging out a space in the wooden socket. It seems to me that this is an extremely practical and valuable point to be considered.

I do not agree with Dr. Martin relative to amputation through the arch or the foot, being entirely unsuitable for satisfactory Prosthesis. If the amputation is anterior to the attachment of the Perineal and tibial muscles, there can be no resulting deformity of the foot stump and this type of amputation can walk with extreme satisfaction in a correctly fitted apparatus.

New Orleans  
**Medical and Surgical Journal**

*Established 1844*

Published by the Louisiana State Medical Society under the jurisdiction of the following-named Journal Committee:

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**SUBSCRIPTION TERMS:** \$2.00 per year in advance, postage paid, for the United States; \$2.50 per year for all foreign countries belonging to the Postal Union.

Material for publication should be received not later than the twentieth of the month preceding publication. Orders for reprints must be sent in duplicate when returning galley proof.

THE JOURNAL does not hold itself responsible for statements made by any contributor.

Communications should be addressed to: *New Orleans Medical and Surgical Journal*, 1551 Canal Street, New Orleans, La.

**UNITY OF MISSISSIPPI AND LOUISIANA'S MEDICAL INTERESTS.**

Louisiana and Mississippi have so many medical problems in common the unification of their interests needs no argument. It is perfectly clear that when the profession of two great states combines for a common end, which means advancing interests both of the profession as well as of the population, that more can be accomplished by such an union than can be accomplished individually or by the expenditure of individual effort. The latter invariably leads to confusion and overlapping and reduplication of activities which in the long run means lost motion and lack of achievement.

There are three outstanding health problems in Louisiana and Mississippi which can be solved by close cooperation by the health authorities and medical societies of the two states.

The first is the problem of mosquito and malaria eradication, the second is hookworm and the third, in the control of which our neighboring state has made more progress perhaps than we have, is that of tuberculosis.

It is also highly desirable that the medical fraternities of the two states cooperate on a common basis in the exchange of ideas along other lines both practical and theoretical. This can be readily accomplished by expression through a common organ namely a co-operative journal. Such a journal would allow free expression of opinions from the medical profession of both states. It would become a common meeting ground for the exchange of ideas and it would beyond a doubt materially further the interests of the professional men of both states.

**HOSPITAL ABUSE.**

The Orleans Parish Medical Society has adopted resolutions in support of an act promoted by the medical staff of the Charity hospital to prevent the use of the hospital by persons able to pay for medical and surgical treatment. Emergency cases are excepted.

The act is now before the senate. It directs the administrators of the hospital, and kindred institutions, to take steps to prevent the abuse alleged. The steps to be taken are not designated in the act but are left to the discretion of the board.

The Charity hospital administrators have already declared themselves against the course that would be required by the act, saying that the effect would be to strain the charity required of the institution.

The medical society has issued the following statement:

"The Orleans Parish Medical society, fully appreciative of its obligations to the afflicted poor, to the public and to organized medicine, met and considered at great length the question of hospital abuse as referred to by senate bill No. 187, now before the legislature.

"This society has always stood against the abuse of the Charity hospital on the part of compensation insurance companies, and those who are able to pay.

"The loose method of admitting and

treating patients regardless of whether they are charity cases or not, even without superficial investigation, necessarily increases the expenses of running the hospital, causing the overcrowded conditions prevailing at certain times in many of the indoor and outdoor departments of Charity hospital and which works genuine hardships on the deserving poor and the visiting staff.

"This is largely due to the fact that so many able to pay are taking up the time and occupying the beds which should rightfully, in the true meaning of charity, be allotted only to the sick poor.

"The society has long recognized the urgent need of such legislation as now proposed in senate bill No. 187, and is on record as favoring such legislation.

"The medical profession called to the attention of the board of administrators of the Charity hospital the necessity for study of this subject, and the need of securing the enactment of laws safeguarding the rights of the poor against the unscrupulous well-to-do. This resolution is a matter of record of date April 9, 1923, and was sent to the present members of the Charity Hospital board as a part of the resolutions endorsing the Charity Hospital appeal. This was done because hospital abuse is a subject deserving of investigation and study, and has long been recognized as needing correction by physicians who have been closely associated with the hospital as internes, house surgeons and visiting members of the staff for the past 25 or 30 years, and even dating back to the administration of Dr. Albert B. Miles, the South's great surgeon who first proposed the subject to his board of administrators, and this also is a matter of record.

"The initiative in this matter is taken by the medical profession following the failure on the part of past and present boards to give this subject either thought, investigation or study.

"As citizens and taxpayers and members of the medical profession, we feel that the question of hospital abuse should be brought to the attention of the public for their information and consideration, at the same time hoping to receive their hearty support and co-operation for the passage of such laws

as will correct this evil and protect the taxpayers from imposition and allow a free use of this institution for those for whom it was founded, the poor and needy.

The following resolutions were unanimously adopted:

"Whereas the Orleans Parish Medical society in special meeting assembled has carefully considered the matter of legislation to prevent hospital abuse.

"Be it resolved that this organization believes the board of administrators of the Charity hospital to be in error in refusing its support of the proposed legislation, and

"Be it further resolved that the Orleans Parish Medical society heartily endorses the legislation proposed by the visiting staff and will lend its active efforts to having this legislation passed."

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#### DR. LEATHERS RETIRES; DR. UNDERWOOD SUCCEEDS.

Dr. W. S. Leathers, for many years Executive Officer of the Mississippi State Board of Health and Professor of Hygiene at the University of Mississippi, has tendered his resignation, effective July 1, 1924.

Dr. Leathers has been one of the pioneers in preventive medicine, and under his administration Mississippi has made marked progress and is among the foremost states of the Union in health work. Through the splendid co-operation accorded him by the physicians, he succeeded in getting Mississippi admitted to the registration area for births and deaths, and malaria and other communicable diseases have been materially reduced.

Dr. Leathers will sojourn in Europe for a year, making an intensive study of preventive medicine, and on his return he will assume the position of Professor of Preventive Medicine recently created by Vanderbilt University, Nashville, Tenn.

In this new position Dr. Leathers will have opportunity to shape the thought of coming leaders in medical and administrative lines of health work. By his personality and experience he will inspire higher ideals in those with whom he comes in contact, and create an earnest desire for LIGHT in the prevention



of unnecessary sickness and death in our Southland.

On the 15th of May, Dr. F. J. Underwood, for many years closely associated with Dr. Leathers in charge of the Child Welfare Work for Mississippi, was elected Secretary to the Board of Health and Executive Health Officer. The mantle falls on worthy shoulders and Mississippi will find in him an effective and efficient worker.

The Journal congratulates both of these gentlemen on the recognition given for their splendid service in the cause of Public health, which is Preventive Medicine.

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#### SCARLET FEVER ROBBED OF ITS TERRORS.

Unless something occurs to especially direct our attention and thoughts to the fact, we are likely to fail to realize the rapidity with which important discoveries in medicine are being made of late and also to realize the far-reaching effect of some of them. The latest disease to be conquered is scarlet fever.

Available fundamental knowledge relative to the cause of scarlet fever has been accumulating for many years. That certain strains of *Streptococcus hemolyticus* were either the specific cause or at least an important contributing cause of scarlet fever and the damage done by the disease has been believed for many years. The final proof has come during the last few months. The experimental production of scarlet fever and proof of the etiological relation of the *Streptococcus hemolyticus* by Dick and Dick (1) (2) will stand out among the accomplishments in medical research of the present century. This accomplishment represents almost the life work of Dr. G. F. Dick and his wife, Dr. Gladys H. Dick, and is a splendid example of the reward that may come from painstaking, conscientious and persistent work along a definite line.

With definite information as to the cause of the disease and especially the nature of the cause of the damage, it was only a natural step that a suitable antitoxin should be produced. This has

been accomplished and according to the reports made at the recent meeting of the Association of American Physicians in Atlantic City by Dochez, by Blake and by the Dicks, the antitoxin for scarlet fever will be the most potent antitoxin that we now have for any disease. The clinical symptoms of scarlet fever include the scarlatinal rash in most individuals and in many cases this is very marked. Administration of suitable doses of antitoxin causes the disappearance of the rash almost like magic within twenty-four hours and co-incidentally with the disappearance of the rash, the patient is transformed from a sick patient practically into a well individual.

Those who listened to the reports felt sure that another epoch-making discovery in medicine has been made and that another disease has been robbed of its terrors. The antitoxin is not available in sufficient quantities to meet the needs, but there is no reasonable doubt but that it will be made available soon in adequate quantity and whenever that time arrives, the physician will have as effective a weapon against scarlet fever as he has against diphtheria. All credit and praise goes to the several workers who have made this possible, but especially to the Dicks, to whom the world will owe a debt of gratitude for all time.

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#### TAXES AND HEALTH.

When the Louisiana Tax Commission met a few weeks ago and apportioned the State funds, education and highways received, respectively, 35 and 32 per cent of the total of the state's income. The two Charity Hospitals, two for the Insane, and the Home for the Feeble minded received 10.5 per cent of the total income. The next largest item was pensions for Confederate Veterans, 6.0 per cent; the next, the State Penitentiary, 4.1 per cent. The Legal, Legislative and Judicial Departments of the State and the Liquidation of the State Debt, received, respectively, about equal amounts. The State Engineer's office, Finance and the Department of Conservation followed in the order named. Miscellaneous, Agriculture, Military and Executive Departments combined received 1.7 per cent, with the State Board of Health last and least from the point

<sup>1</sup>Dick, G. F., and Dick, Gladys H.: Experimental Scarlet Fever, J.A.M.A. 81:1166, Oct. 6, 1923.

<sup>2</sup>The Etiology of Scarlet Fever, *ibid.* 82:301, Jan. 26, 1924.

of view of the funds apportioned—0.4 per cent.

Louisiana in apportioning the small amount for health work is not alone. Many other states encourage education, highways, hospital service, etc., by large appropriations, but fail to give sufficient to make health work even a protection—not to speak of health promotion.

It is only a few years since we began to understand the value of health as an asset to the community—an asset to the state and to the nation. Unfortunately, there are comparatively few people yet who believe even in the economic phase of health work. If the apportionment for health were raised, the percentage required for the hospitals and hospitals for the insane would be lessened. In other words, if we would pay for prevention, we would need less for remedial care.

It is also a very few years since the public mind became focused upon the need for child health conservation. In these few years great progress has been made. Annual examinations were made and remedial measures applied to the children of the school age. These children were in groups. There was already established a supervisory agency and so volunteer organizations and officers interested in health could make greater immediate appeal and show greater results by examination and care of the school children, health conditions of the of health work for children.

From surveys and examinations of school children health conditions of the child of the pre-school age became apparent and from the study of this group the tremendous need for more attention to infants and to mothers during the

pre-natal period and in child-birth. Comparisons began to be made between the different counties and the different states and the appalling number of maternal deaths, and deaths of infants under one year came as a shock to thousands of health workers.

Through the efforts of the Children's Bureau and the almost unanimous approval of the organized women of the United States, Congress made an appropriation to be equally apportioned among the several states and an additional sum to be apportioned annually on a fifty-fifty basis. Forty-one states have accepted their quota and have put into effect comprehensive programs which include instruction of prospective mothers; instruction for the care of the infant in proper feeding, etc., and instruction of ignorant midwives. In order to do this character of work public health nurses are employed, directed by a local physician or have their activities suggested and supervised by a physician or director in the Bureau of Child Hygiene of the State Board of Health.

Prospective mothers are urged to have the attention of a physician during the period before child birth, and they are also urged to have a competent physician or a trained midwife with them during the period of child birth. No effort is made to give nursing service except when the family is very poor and cannot afford to employ the service they need.

In general, the programs are planned to give skilled advice, largely to persons who live in the rural districts far from community centers where there may be hospitals, physicians or nurses.

# TRANSACTIONS OF MISSISSIPPI STATE MEDICAL ASSOCIATION

To the Mississippi State Medical Association:

Dear Doctors:

At the recent May meeting of the State Association the House of Delegates appointed a committee consisting of Drs. E. F. Howard and S. W. Johnston of Vicksburg, together with the Secretary, and authorized said committee to arrange with the New Orleans Medical and Surgical Journal to become the official organ of the Association, if the committee deemed it wise and practical.

This committee has made such arrangements as it believes will be to the best interests of the members of the Association, and for this year at least the minutes and scientific papers will be published in the Journal instead of in the Annual Transactions. The Journal will be sent monthly to each member.

Those members who care to preserve the transactions of the Association in permanent form may arrange with the publishers of the New Orleans Medical and Surgical Journal to bind the several issues at the end of the Association year into one volume. This, of course, will be an individual matter, and will necessitate your keeping a file of the Journals as they come to you from month to month.

In arranging for the binding of the Journal it will not be necessary to communicate with the Secretary at all, but take the matter up direct with the publishers, as your arrangements with them will be personal and not Association matter.

We trust and believe that the new arrangement will more nearly meet the demand of modern conditions and the New Orleans Journal will fill a long-felt want in our Association life.

Respectfully,

T. M. DYE, Secretary.

July 1, 1924.

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## MINUTES OF GENERAL SESSION.

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The Fifty-Seventh Annual Session of the Mississippi State Medical Association was held in Jackson, May 13th, 14th and 15th, 1924.

The first session of the scientific pro-

gram was called to order in Convention Hall, Edwards Hotel, at 9:30 a. m., May 13th, by the President, Dr. W. A. Dearman, Long Beach.

Dr. B. S. Guyton, Oxford, read a paper entitled: "Practical Facts Concerning the Eyes and General Practice." This paper was discussed by Drs. W. S. Sims, Jackson; E. LeRoy Wilkins, Clarksdale, and D. C. Montgomery, Greenville.

Dr. E. F. Howard, Vicksburg, read a paper entitled: "Some Ideals in Tonsillectomy." This paper was discussed by Drs. W. B. Dobson, Jackson; George E. Adkins, Jackson, and the discussion closed by Dr. Howard.

The President at this time introduced Dr. Elizabeth Bass of New Orleans, fraternal delegate from the Louisiana State Medical Society.

Dr. John H. McLean, Jackson, read a paper entitled: "Head Injuries." This paper was discussed by Drs. J. W. Barksdale, Jackson, and H. R. Shands, Jackson.

Owing to the illness of Dr. J. C. Culley, Oxford, he was not able to read his paper on "Brain Abscess." It was moved by Dr. H. R. Shands, that the Secretary of the Association be instructed to send to Dr. Culley a telegram expressing the regret of the Association for his absence, and congratulating him on his improvement. This motion was duly seconded and unanimously carried.

Dr. W. H. Parsons, Vicksburg, read a paper entitled "Surgery of the Thyroid." This paper was discussed by Drs. W. W. Crawford, Hattiesburg; W. E. Sistrunk, Rochester, Minn.; E. F. Howard, Vicksburg; J. G. Gardner, Columbia; G. Street, Vicksburg, and the discussion closed by Dr. Parsons.

Dr. Seale Harris, Birmingham, Ala., made a short talk, and the session adjourned until 1:30.

### *Tuesday Afternoon Session.*

The Tuesday afternoon session was called to order at 1:30 by the President, Dr. W. A. Dearman.

Dr. T. T. Batson, Hattiesburg, read a paper entitled "The Surgical Appendix: Its Simulation and Differential Diagnosis." This paper was discussed

by Drs. R. H. Foster, Laurel; H. R. Shands, Jackson; J. G. Gardner, Columbia; C. C. Hightower, Hattiesburg; V. B. Philpot, Houston; E. H. Linfield, Gulfport, and the discussion closed by Dr. Batson.

Dr. H. R. Shands, Jackson, read a paper entitled "Acute Intestinal Obstruction Necessitating Intestinal Resection." This paper was discussed by Drs. John Darrington, Yazoo City; Julius Crisler, Jackson; H. H. Hairston, Meridian; J. G. Gardner, Columbia; W. E. Sistrunk, Rochester, Minn., and the discussion closed by Dr. Shands.

Dr. V. B. Philpot, Houston, read a paper entitled "Ectopic Gestation; Report of Cases." This paper was discussed by Drs. E. C. Parker, Gulfport; H. L. McKinnon, Hattiesburg; R. A. Clanton, Grenada; R. D. Sessions, Natchez, and the discussion closed by Dr. Philpot.

Dr. M. Y. Dabney, Birmingham, Ala., read a paper entitled: "The Surgical Treatment of Leukorrhoea." This paper was discussed by Drs. J. P. Wall, Jackson; R. D. Sessions, Natchez; Wm. H. Hosey, Stringer, and the discussion closed by Dr. Dabney.

Dr. P. G. Gamble, Greenville, read a paper entitled "Treatment of Prostatic Hypertrophy." This paper was discussed by Drs. L. B. Otken, Greenwood; L. D. Dickerson, McComb, and the discussion closed by Dr. Gamble.

Dr. H. H. Hairston, Meridian, read a paper entitled "Treatment of Puerperal Sepsis." This paper was discussed by Drs. C. C. Hightower, Hattiesburg; E. C. Parker, Gulfport; Albert C. Bryan, Meridian; S. T. Wells, Alligator; W. H. Scudder, Mayersville; Wm. H. Hosey, Stringer; C. A. Sheeley, Gulfport; H. L. McKinnon, Hattiesburg; D. T. Talmadge, Jackson; E. H. Linfield, Gulfport; L. B. Hudson, Hattiesburg, and the discussion closed by Dr. Hairston.

The session adjourned until Wednesday morning.

#### *Tuesday Evening Session.*

The Tuesday evening session was held in the Municipal Auditorium, Dr. George E. Adkins of Jackson presiding.

The Invocation was pronounced by Rev. R. E. Hough of Jackson.

The Mayor of Jackson, W. A. Scott, welcomed the Association on behalf of the municipal authorities.

Governor H. L. Whitfield welcomed the members on behalf of the City of Jackson and the state of Mississippi.

Dr. John Darrington, Yazoo City, welcomed the guests on behalf of the Central Medical Society.

Dr. James W. Lipscomb, Columbus, responded to the above addresses.

Mrs. S. C. Red of Houston, Tex., President of the Woman's Auxiliary, made an address in behalf of that organization.

Dr. W. A. Dearman, Long Beach, read his address of President, entitled, "The Golden Rule in Medicine."

Dr. W. E. Sistrunk, Rochester, Minn., read the Annual Oration entitled: "Reduction of Surgical Mortality."

The meeting adjourned.

#### *Wednesday Morning Session.*

The Wednesday morning session was called to order at 9:30 by the President, Dr. W. A. Dearman.

Dr. N. C. Womack, Jackson, read a paper entitled "Tuberculosis in Infancy and Childhood." This paper was discussed by Drs. Riley W. Burnett, D'lo; George E. Adkins, Jackson; C. C. Buchanan, Hattiesburg; Richard C. Bunting, Memphis, Tenn., and the discussion closed by Dr. N. C. Womack.

Dr. J. B. Howell, Canton, read a paper entitled: "Endocarditis from the Standpoint of Prevention." This paper was discussed by Drs. Hiram Williams, Prentiss; Whitman Rowland, Jr., Oxford; N. S. Stern, Memphis, Tennessee, and the discussion closed by Dr. Howell.

Dr. I. C. Knox, Vicksburg, read a paper entitled: "Some Other Etiologic Factors in Arthritis." This paper was discussed by Drs. C. C. Hightower, Hattiesburg; J. G. Gardner, Columbia; H. M. Folkes, Biloxi; H. R. Hays, Jackson, and the discussion closed by Dr. Knox.

Dr. E. L. Eggleston, Battle Creek, Mich., read a paper entitled "The Physician's Responsibility to the Patient in a Diagnostic Way." This paper was discussed by Drs. G. Y. Gillespie, Jr., Greenwood; P. W. Rowland, Oxford; Seale Harris, Birmingham, Ala., and the discussion closed by Dr. Eggleston.

The session adjourned until 1:30.

#### *Wednesday Afternoon Session.*

The Wednesday afternoon session was called to order at 1:45 by the President, Dr. W. A. Dearman.

Dr. R. C. Finlay, Greenville, read a paper entitled "Fluoroscopy in Medical Diagnosis." This paper was discussed by Drs. W. F. Henderson, Jackson, and C. C. Hightower, Hattiesburg.

Dr. Whitman Rowland, Jr., Oxford, read a paper entitled: "A Consideration of the Heart from the Standpoint of Functional Capacity." This paper was discussed by Drs. W. A. Dearman, Long Beach; N. S. Stern, Memphis, Tenn., and the discussion closed by Dr. Rowland.

In the absence of Dr. W. B. Dickins, Greenwood, his paper on "The 'Old Age' Problem," was read by Dr. G. W. F. Rembert of Jackson. This paper was discussed by Drs. B. A. Anderson, Booneville; Seale Harris, Birmingham, Ala.; P. W. Rowland, Oxford; Albert C. Bryan, Meridian; H. R. Shands, Jackson, and Olin West, Secretary American Medical Association, Chicago.

The session adjourned until Thursday morning.

#### *Thursday Morning Session.*

The Thursday morning session was called to order at nine-fortyfive by the President, Dr. W. A. Dearman.

Dr. Russell A. Hennesay, Memphis, Tennessee, read a paper entitled: "Treatment of Venereal Diseases from the Standpoint of Prevention." This paper was discussed by Dr. Hardie R. Hays, Jackson; William L. Little, Wesson; William H. Frizell, Brookhaven; Robert S. Curry, Jackson; and the discussion closed by Dr. Hennesay.

Dr. Daniel J. Williams, Gulfport, read a paper entitled: "History of Public Health Work in Harrison County." This paper was discussed by Drs. L. C. Frickes, Ass't Surgeon General in charge of Malarial Work in the United States; W. S. Leathers, University; H. M. Folkes, Biloxi; Oscar Dowling, New Orleans; and the discussion closed by Dr. D. J. Williams.

Dr. C. C. Applegate, Jackson, read a paper entitled "Whole Time County Health Physician." This paper was discussed by Drs. R. N. Whitfield, Florence; and Whitman Rowland, Jr., Oxford.

Dr. C. D. Mitchell, Jackson, read a paper entitled: "Modern Treatment of the Insane." This paper was discussed

by Drs. W. S. Leathers, University, and Oscar Dowling, New Orleans.

The Fifty-seventh Annual Session adjourned *sine die*.

#### MINUTES OF THE HOUSE OF DELEGATES.

The twenty-first annual session of the House of Delegates of the Mississippi State Medical Association met in the Convention Hall, Edwards Hotel, Jackson, May the thirteenth, 1924, at 8:10 a. m., President W. A. Dearman presiding. Roll call showed forty delegates present.

In the contest over the seating of the delegate from Bolivar County, the matter was referred to the Council, which later ruled that the Delta Medical Society should be entitled to the delegate from Bolivar.

J. J. Haralson, Forest, was elected a member of the Committee on Budget and Finance for three years to succeed himself.

The Secretary read the following report, which was referred to a committee composed of Henry Boswell, H. F. Garrison and C. A. Sheely:

To The House of Delegates,  
Mississippi State Medical  
Association,  
Jackson, Miss.  
Gentlemen:

The membership for 1923 reached 987, which is a high water mark for recent years.

I call your attention to certain changes in the state law governing the appointment of the State Board of Health. As the Board under the new law will begin to function on January first 1926, it will be necessary for this Association to take some action at its regular annual meeting in 1925. The Association is to nominate three men from each Congressional District in the state, from which nominees the Governor will select one for each District for membership on the State Board of Health.

I call your attention to the following proposed changes in the Constitution which were offered at the 1923 session, and which have been sent to each component Society, and which should come up for final disposition at this session: "Change Section 2 of Article V to

read as follows: 'The time and place for holding the annual session shall be fixed by the House of Delegates, but when unable to act, or in emergencies, the Council shall have the power to fix the place for holding the annual session, or, in emergencies, to change the place of meeting.'

"Change Section 4 of Article IV to read as follows: 'Any component Society may present to the House of Delegates the names of such retired physicians who have been members of the Association for ten consecutive years, and who, by reason of previous service to organized medicine, are worthy to be especially honored, for election to honorary membership. Such honorary members shall be carried free of all charges on the rolls of the County Society and of the State Association.'

"Change Article VII, enumeration 4, to read as follows: 'all ex-presidents, provided they still be members of the Association.'

Respectfully submitted,

T. M. Dye, Secretary.

Treasurer Buchanan read his report, which was referred without motion to the Committee on Budget and Finance, as was also the financial report of the Secretary. (See Exhibits A and B)

In the matter of the conflict of a by-law, amended in 1923, with the Constitution, relating to the time for holding annual elections, the President ruled that the amendment was void until such time as the Constitution should be amended and the two be in conformity.

At this point a recess of five minutes was taken to enable the Councilor Districts to select members of the Nominating Committee, the selections being as follows.

First District—U. S. Wasson, Moorhead.

Second District—S. E. Eason, New Albany.

Third District—M. W. Robertson, Rienzi.

Fourth District—T. J. Brown, Grenada.

Fifth District—Henry Boswell, Sanatorium.

Sixth District—I. W. Cooper, Meridian.

Seventh District—A. D. Tisdale, Laurel.

Eight District—W. L. Little, Wesson.

Ninth District—E. H. Linfield, Gulfport.

On motion the House adjourned to meet at 8 o'clock Wednesday morning.

The House of delegates reconvened Wednesday morning, May 14th, at eight-thirty o'clock, President Dearman in the chair.

The following proposed amendment to the Constitution was read:

"Amend Article VI Section 3 to read as follows: 'The officers of this Association shall be elected by the House of Delegates as the last order of business of the House of Delegates on the last day of the annual session following the adjournment of the General session.'

The following proposed amendment to the by-laws was read:

"Change part of Chapter VI Section 2 to read as follows: 'It shall nominate three men from each Congressional District in the state for membership on the State Board of Health in accordance with the state law governing same.'

Dr. Elizabeth Bass of New Orleans was introduced as Fraternal Delegate from the Louisiana State Medical Society. After extending greetings from the Louisiana Society Dr. Bass presented the matter of the adoption of the New Orleans Medical and Surgical Journal by the Mississippi Association as its official journal. After some discussion this matter was postponed until Thursday.

P. W. Rowland, Chairman, reported for the Committee on Necrology as follows:

Ollie Gorden Coleman, Coffeerville, Died Feb. 6, 1924.

Albert Sidney Fair, French Camp, Died April 11, 1924.

P. W. Rowland offered the following resolution.

"Whereas: Heretofore the Committee on Necrology has been performing in a rather perfunctory manner, and

Whereas: Proper tribute should be paid members of the Association who have died,

Therefore be it resolved that this Committee be made a standing one, and that the duty of its chairman shall be the collection of such names of members who have died, and a report be made

to the House of Delegates at each succeeding meeting."

Dr. Olin West, Secretary of the American Medical Association, was introduced and talked helpfully of matters of interest to the State and National organizations.

The following proposed change in the By-laws was presented in writing:

"Change Chapter XV by adding after the words 'each year' the following: 'but membership in the State Association shall not lapse until April the first of the following year, except in so far as it pertains to Medical Defense protection, in which membership shall lapse with the calendar year.'"

On motion the House adjourned to meet at eight o'clock on Thursday morning at the Municipal Auditorium.

The House of Delegates reconvened at eight o'clock Thursday morning, May 15th, in the Municipal Auditorium, W. A. Dearman in the chair. Roll call showed forty-seven present including eight ex-presidents.

The Nominating Committee brought in the following report:  
"To the House of Delegates,  
Mississippi State Medical  
Association.  
Gentlemen:

We the Nominating Committee appointed by you to select candidates for the various offices of this Association, beg leave to make this our final report.

'On being called to order I. W. Cooper was made Chairman and W. L. Little Secretary. The following nominations were made:

For President: G. S. Bryan, Amory; J. J. Haralson, Forest; C. E. Catchings, Woodville.

For Vice-Presidents: W. J. Anderson, Meridian; D. C. Montgomery, Greenville; C. A. McWilliams, Gulfport.

For Councilor First District. J. W. Lucas, Moorhead.

For Delegate A. M. A: Henry Boswell, Sanatorium.

For Fraternal Delegates: To Louisiana, W. W. Crawford, Hattiesburg; To Arkansas, E. R. McLean, Cleveland; To Tennessee, M. W. Robertson, Rienzi; To Alabama, I. W. Cooper, Meridian.

Respectfully submitted,

I. W. Cooper, Chairman  
W. L. Little, Secretary.

May 14, 1924.

On the second ballot J. J. Haralson of Forest received a majority of the votes cast and was declared elected President of the State Association, whereupon he made a short speech of acceptance. G. S. Bryan made a short talk, part of which was a motion that Dr. Haralson be declared unanimously elected.

On motion of C. M. Shipp the Secretary cast the vote of the House for the remaining nominees, whereupon the President declared the following elected: Vice-presidents, W. J. Anderson, D. C. Montgomery, C. A. McWilliams. Councilor First District, J. W. Lucas; and the delegates to the A. M. A. and our sister states as nominated.

J. J. Haralson, the President elect, resigned as a member of the Committee on Budget and Finance, and S. W. Johnston of Vicksburg was elected his successor for a term of three years.

The question of adopting the New Orleans Medical and Surgical Journal as our official organ, which matter was postponed from yesterday's session, came up for discussion. Dr. Oscar Dowling of the Louisiana Society was introduced and spoke of the proposition.

A motion by Willis Walley, amended by J. J. Haralson, prevailed, instructing the President to appoint a committee of three, of which the Secretary should be one, said committee being empowered to act in vacation for the Association as a whole, and the action of this committee be final. The President appointed on this committee with the Secretary E. F. Howard and S. W. Johnston of Vicksburg.

The amendment to Chapter XV of the By-laws, introduced at yesterday's session, making membership lapse on April the first, was called up and carried.

W. H. Scudder introduced the following proposed change in the Constitution:

"Amend line 4 of Section 4 of Article IV to read twenty-five years instead ten years."

E. H. Linfield placed in nomination Biloxi as the meeting place for the annual session in 1925. A. C. Bryan nominated Meridian, and D. W. Jones nominated Jackson. The election resulted as follows: Biloxi, 27; Meridian, 11;

Jackson, 4. Biloxi was declared selected.

The report of the Committee on Budget and Finance was unanimously adopted. (See Exhibit C).

F. J. Underwood made a verbal report for the Committee on Public Policy and Legislation.

On motion of J. J. Haralson a rising vote of thanks was given the Central Medical Society and the city of Jackson for their liberal hospitality.

The Council made its report which was adopted. (See Exhibit D).

The House of Delegates adjourned to meet in Biloxi at eight o'clock on the morning of May the twelfth, 1925.

Signed,

T. M. Dye, Secretary.

May 15, 1924.

*Report of the Council.*

Exhibit D.

May 13, 1924. Council met 9:20 a. m., present McLean, Guyton, Spalding, Jones, Gill, Gavin, Frizell, Williams, Holmes. All Concilors filed reports.

The Council approved action of the executive committee, and allowed attorneys fees in case of B. E. Hewitt for \$250.00, and C. W. Norwood for \$125.00 M. L. Flynt, \$250.00, L. A. Barnett for \$250.00 and H. N. Mays for \$250.00. The other suits pending were referred back to the executive committee.

In re the controversy as to where Bolivar County belongs, the Council declared Bolivar County a component part of the Delta Medical Society. This society now consists of Washington, Sunflower, Leflore, Humphreys, Bolivar.

Council then adjourned to meet at 8.00 a. m. tomorrow.

May 14, 1924: Council met at 8:00 a. m. Present, Williams, Jones, Frizell, Spalding, McLean, Holmes.

Councilor Holmes presented the case of Dr. J. James, of Ackerman, who is being sued by R. P. Edwards. Defense of the case was approved by the Council in principle, details of settlement left to the executive committee.

The request of the Section on Eye, Ear, Nose and Throat for permission to publish the paper of Dr. McWilliams in any reputable medical journal, was granted.

In re application of Central Medical Society for charter, it is ordered that each county desiring to enter into this society submit a signed application for such union, showing a two-thirds majority of the paid-up membership as desiring such union, the matter to be taken up at the 1925 meeting of the Council.

Councilor Holmes submitted a petition signed by six members of Grenada County requesting that Grenada County be dis-associated with the Winona District Medical Society and added to the North Mississippi Six County Medical Society. Passed for consideration at a later meeting.

Council adjourned subject to call of Chairman.

May 13, 1924.

To the Council and House of Delegates,  
Miss. State Medical Assn.,  
Jackson, Miss.  
Gentlemen:

The First Councilor District has made some changes the past year, we think and hope for the best of the Medical Profession in general, we have organized the Delta Medical Society with the approval of the Mississippi State Medical and they have had two meetings since, one at Cleveland and one at Greenville, these meetings have been well attended and has given more doctors a chance to attend a local society than heretofore, also has not detracted from the Clarksdale and Six County, which is going along nicely and doing a good work, besides the doctors of Clarksdale are getting together in a business way that any other County would do well to follow.

All suits have been settled that I can get reports on, which were very unjust in the beginning, as is usual the case when a doctor is sued.

The Profession is taking more interest in their work and feel that a brighter day is ahead for us, especially the unlimited credit we have very foolishly extended to undeserving patients, we find the deaths and removals have caused plenty work for all that will apply themselves.

As this is my first report and not being familiar with the work, have not accomplished as much as should.



With best wishes from your humble servant,

E. R. McLean

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May 13, 1924.

Councilor First District.

To The Council:

There is no material change in the condition of the 2nd district. The various component societies are doing good work. The membership is almost stationary from year to year—with nearly all active men in the association as members.

B. S. Guyton  
Councilor.

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May 13, 1924.

To The Council and House of Delegates:

The Third Councilor District is composed of the Alcorn-Tishomingo Counties Medical Society and the East Mississippi Eleven Counties Medical Societies. The former society has a big meeting once a year and there is practically no friction. The membership is 100 per cent of active doctors.

The Eleven County Society meets quarterly, has a fine program, has a large attendance at each meeting, and a fine spirit of fellowship exists. The membership exceeds one hundred.

Respectfully submitted,

F. C. Spalding.

Councilor Third District.

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*Report of Councilor 5th District.*

The activities of organized medicine in the District are limited to the Central Medical Society. The other counties have no regular meetings, merely a perfunctory meeting of enough to elect officers and delegates once a year.

The Central Medical Society holds regular meetings once a month, with a fine attendance, always carrying out a full program, with essays and ample discussions. This Society maintains its own journal published once a month, printing the essays and discussions of the Society, abstracts, etc. The journal is being sent without charge to all the doctors of the State.

Warren County again requests permission to come into the Central Medical Society.

The Council and House of Delegates, Mississippi State Medical Association: Am glad to report all counties in The 6th, doing fairly good work, but room for a great deal of improvement.

W. G. Gill

Councilor Sixth District.

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To the Mississippi State Medical Association:

Gentlemen:

It is a pleasure to report that the Seventh Councilor's District is in splendid condition as to ethics, etc. We have a splendid Society which meets regularly four times a year and it is always well attended, this society embraces all the counties in the district and has a large membership.

Respectfully submitted,

E. M. Gavin.

Councilor Seventh District.

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May 13, 1924.

Council Mississippi State Medical Assn.

Gentlemen.

I am sorry to have to report a falling off of membership in the two Societies in the Eight District. I can ascribe no cause other than a lack of interest in the work by the doctors.

I have used my office to urge them to pay their dues and enlist in the work of their respective societies, but they do not heed the call. And some of the delinquents are among our best men.

Fraternal relations among them are fine. I have had no intimation of any ill will among them.

I have had to take part in settling an old law suit that was revived against three of our doctors, but our attorney's succeeded in non-suiting the case. I have recently had occasion to furnish defense for another doctor in which we got a "jury and verdict for the defendant" without the doctor being called into court. I recommend settlement of the attorney's account in this case.

Respectfully submitted,

W. H. Frizell.

Councilor Eighth District.

May 13, 1924.  
Ninth District

Gentlemen:

The Harrison-Stone County Medical Society continues to be the leading society of this District. They hold regular well attended meetings missing but one meeting in the past 13 years. The societies in Jackson and Hancock continue active but are small because of numbers eligible to membership. The Doctors of Lamar, Pearl River and Marion Counties have been given permission to join the South Mississippi Medical Society. No suits for malpractice have been reported.

Respectfully,  
Daniel J. Williams.

OFFICERS MISSISSIPPI STATE  
MEDICAL ASSOCIATION 1924-  
1925.

- President—J. J. Haralson, Forest.  
Vice-President—W. J. Anderson, Meridian.  
Vice-President—D. C. Montgomery, Greenville.  
Vice-President—C. A. McWilliams, Gulfport.  
Treasurer—J. M. Buchanan, Meridian.  
Secretary—T. M. Dye, Clarksdale.
- Councilor, First District—J. W. Lucas, Morehead.  
Councilor, Second District—B. S. Guyton, Oxford.  
Councilor, Third District—F. C. Spalding, West Point.  
Councilor, Fourth District—T. W. Holmes, Winona.  
Councilor, Fifth District—D. W. Jones, Jackson (Secretary).  
Councilor, Sixth District—W. G. Gill, Gavin, Overtt.  
Councilor, Seventh District—E. M. Newton.  
Councilor, Eighth District—W. H. Frizell, Brookhaven.  
Councilor, Ninth District—D. J. Williams, Gulfport (Chairman).
- Delegates A. M. A., S. W. Johnston, Vicksburg; Henry Boswell, Sanatorium.  
Fraternal Delegate Louisiana State Society, W. W. Crawford, Hattiesburg.

Fraternal Delegate Arkansas State Society, E. R. McLean, Cleveland.

Fraternal Delegate Tennessee State Society, M. W. Robertson, Rienzi.

Fraternal Delegate Alabama State Society, I. W. Cooper, Meridian.

Chairman Section on Medicine, C. E. Catchings, Woodville.

Chairman Section on Surgery, W. G. Gill, Newton.

Chairman Section on E. E. N. and T., B. S. Guyton, Oxford.

Chairman Section on Hygiene, F. J. Underwood, Jackson.

Next annual meeting Miss. State Med. Ass'n, Biloxi May 12-13-14, 1925.

Exhibit "A"—Secretary's Financial Report.

	Receipts, 1923.	
	(May 7 to Dec. 31, 1923)	
May 7	Bal. in bank	\$3155.92
Dec. 31	63 dues . . . .	189.00—\$3344.92
	Disbursements, 1923.	
	(May 7 to Dec. 31, 1923)	
May 9	Registrar . . . .	\$ 10.00
May 9	Reporter . . . .	175.00
May 12	Expense	
	Treasurer ..	20.33
May 12	Councilor	
	Jones . . . .	8.45
May 12	Councilor	
	Guyton . . . .	14.00
May 12	Councilor	
	Frizell . . . .	3.85
May 12	Councilor	
	Minor . . . .	24.00
May 14	Treasurer Buchanan . . . .	2000.00
May 15	Refund Delta Society . . . .	3.00
May 21	Stenographer . . . .	4.75
Aug. 23	Jackets . . . .	17.90
Aug. 23	Printing . . . .	4.75
Sep. 4	Stenographer . . . .	5.00
Oct. 1	Postage . . . .	10.00
Oct. 24	Printing . . . .	4.00
Dec. 31	Secretary's salary . . . .	500.00—\$2805.03
Dec. 31	Balance in bank . . . . .	\$ 539.89
	Receipts, 1924.	
	(Jan. 1 to May 10, 1924)	
Jan. 1	Balance in bank . . . . .	\$ 539.89
May 10	869 dues . . . .	2607.00—\$3146.89
	Disbursements, 1924.	
	(Jan. 1 to May 10, 1924)	
Feb. 1	Postage . . . .	\$ 10.00
Mch. 1	Printing . . . .	4.50
Apr. 2	Printing . . . .	14.00
Apr. 2	Treasurer's bond . . . .	18.75
Apr. 30	Postage . . . .	10.00— 57.25
May 10	Balance in bank . . . . .	\$3089.64
	T. M. DYE Secretary.	
	May 10 1924.	

**Exhibit "B"—Treasurer's Report.**

Balance Association funds as shown by last report .....	\$1,559.20
May 15th, 1923, received from Dr. T. M. Dye, Secretary .....	1,747.25
	\$3306.45

**Disbursements.**

December 3rd, 1923, The Tucker Printing House .....	\$ 947.05
Balance .....	\$2,359.40

**Receipts Medico-Legal Fund.**

Balance on hand last report.....	\$6,531.65
May 15, 1923, received from Dr. T. M. Dye, Secretary .....	252.75
May 10, 1924, received from interest on T. C. No. 15544 .....	40.00
May 10, 1924, received from interest on T. C. No. 16118 .....	66.30
May 10, 1924, received from interest on T. C. No. 16169 .....	40.00
May 10, received from interest on Liberty Bonds .....	170.00
	\$7,100.70

**Disbursements.**

June 15, 1923, to J. S. Sharp.....	\$125.00
June 12, 1923, to Hilton & Hilton, Attorneys.....	250.00
April 28, 1924, to Dr. L. A. Barnett.....	250.00— 625.00
Balance .....	\$6,475.70
Association balance .....	\$2,359.40
Medico-Legal fund .....	6,475.70
	\$8,835.10

The above funds are represented as follows:

Cash in hand.....	\$ 791.09
Time Certificate No. 17636.....	1,040.00
Time Certificate No. 17637.....	1,040.00
Time Certificate No. 17638.....	1,724.01
Second Liberty Loan Bond No. E 00167150.....	1,000.00
Third Liberty Loan Bond No. E 1539096-1539097 \$1000.00 each.....	2,000.00
Fourth Liberty Loan Bond No. K 00705340.....	1,000.00
Clarksdale and Six County Medical Society check on Delta Bank.....	240.00
	\$8,835.10

Respectfully submitted,

J. M. BUCHANAN, Treasurer.

May 12, 1924.

**Exhibit "C"—Report of Committee on Budget and Finance.**

House of Delegates  
Mississippi State Medical Association,  
Gentlemen:

We submit budget for next year as follows:

Expenses of meeting.....	\$ 250.00
Council .....	100.00
Secretary's salary and expenses....	600.00
Transactions .....	850.00
Expenses of President.....	100.00
Incidentals .....	50.00
Total .....	\$1950.00

We have examined the reports of the Secretary and Treasurer and find same correct.

We recommend that the following bills be allowed and ordered paid:

Councilor Spalding .....	\$11.56
Councilor Jones .....	7.45
Councilor Frizell .....	5.80
Treasurer Buchanan .....	17.00
Councilor Guyton .....	7.50

Respectfully submitted,

J. J. HARALSON,  
E. F. HOWARD.

May 13, 1924.

# TRANSACTIONS OF ORLEANS PARISH MEDICAL SOCIETY

## *Annual Report of President, Dr. H. W. Kostmayer.*

### *To The Members of the Orleans Parish Medical Society*

This is an account of the stewardship of the past year.

Let me remind you that a year ago, on taking office, we specifically stated that our ambitions were modest. We pledged ourselves to add, if possible, momentum to the movement to depoliticize Charity Hospital and minimize hospital abuse; to make our scientific programs as attractive as possible; and to budget within our income and live within our budget, setting aside something, if ever so little, toward increasing our Domicile Fund.

Our pledges were wise, if very modest, for we have been able to live up to them. Continued agitation of the question of depoliticizing Charity Hospital culminated in a letter from the Charity Hospital Staff endorsed by the Orleans Parish Medical Society, demanding of the candidates for the office of Governor of the State their individual attitudes toward this all-important question. The following are the answers received:

Lieutenant Governor Bouchaud's reply was: "I beg to inform you that I am thoroughly in accord with the idea that the Charity Hospital should be free from politics; that the board of administrators of the hospital should be men of known integrity and ability, who have at heart the best interests of that institution, and who should be appointed for overlapping terms as prescribed by law."

Francis Williams, campaign manager from Huey P. Long, replied as follows:

"I am authorized by the Honorable Huey P. Long, candidate for Governor, to say to you in response to your letter against the Legislative Committee with request that they cooperate by invitation with the Association of Commerce in this matter."

Those who have attended the Scientific Sessions will agree that there has been furnished an abundance of inter-

esting and valuable visitors. We are very grateful to the Scientific Essays Committee, and especially to the chairman, for the efficient management of these activities.

The Society budgeted within its income and kept within the budget to the extent that there is some small surplus, which the new Board could readily add to the Domicile Fund.

At times during the year the possibility of again having our own home was discussed. Lately the Secretary submitted the plan of a western Medical Society which has been successfully operated and has been adopted by at least two other county Societies. Essentially it consists in an assessment payable over a period of years and an initiation fee for new members. It is by no means our intention to urge the adoption of this plan now, but its mention may stimulate efforts in the future.

Your attention is invited to the fact that our Charter provides that officers should serve for one year from election to election, whereas the newly elected officers are not officially installed until some time after election. The situation has possibilities for legal complications, and could be remedied by an amendment to the Charter.

Except for the visitations of the Grim Reaper, Death, this has been a most pleasant year in Society activities. There has been no friction, no petty bickerings, no medical politics. The Board and the Officers have been uniformly punctual and thorough in the performance of their duties. Too much cannot be said in praise of their support. It is with a pang of sorrow that the cordial relationship is terminated. Theodore Roosevelt truthfully said that every man owes a part of his time to the upbuilding of his profession. Carrying out his injunction has been a very pleasant task due to the whole hearted cooperation of the officers and Members.

I am deeply grateful and thank you most heartily.

*Inaugural Address of President Dr.  
Chaille Jamison.*

At the end of 1923 the affairs of the Orleans Parish Medical Society are in such an excellent state that the task of the incoming executive body should be an easy one.

As a member of the Board of Directors for many years, I have had an opportunity to observe at first hand the gratifying progress that has occurred; a progress only made possible by the financial gain incurred from the sale of our domicile on Elk Place, and conserved and strengthened by the excellent judgment shown by your Boards of Administration since that time.

I believe that the incoming Board will not fail in its duty, which is primarily to guard and guide this progress through its natural channels; by a rigid conservatism and a most cautious consideration of any radical departure from the policy of the past few years.

The income of the Society, derived from interest on its invested capital and dues of members, is adequate for its present needs. A modest surplus has been shown for a few years, which has gone to build a fund which in time will grow large enough to support the library by interest from it. I take this opportunity, however, to point out that whenever the capital of this Society is used for any purpose which is not revenue-producing, our income will no longer be adequate for our needs.

The Society has been lucky in having Dr. Lanford for its treasurer. His discretion and ability in that position cannot be praised too highly.

At present the membership is about 450, which is a gratifying increase. However, there remain about 150 legitimate practitioners in this parish who are not yet members of this organization. Every effort should be made to show these gentlemen the advantage of membership in the representative organization of their profession.

It does not seem feasible or desirable to reduce the dues, which are certainly not burdensome, particularly when many of us look back to the time when we were constantly being asked for donations, besides and above the membership dues; this has not occurred for many years, and let us hope will not

occur again, at least for the actual support of this Society.

Our scientific meetings are one of the prime objects for which we are organized; though always instructive, one cannot help feeling that the necessity, which has hitherto been in force, or having all addresses written and becoming the property of the New Orleans Medical and Surgical Journal has been a handicap to their breadth, and has prevented many busy and prominent members from addressing this body more often. It is hoped that one lecture on some topic of general medical interest, given by a recognized master in his particular field, can be arranged during the next year. This will only slightly curtail the production of written articles for publication, and it is believed would greatly enhance the value of the scientific meetings.

The Library is well equipped to serve its purpose, and it has been demonstrated during the past two years that it can be run in a satisfactory manner and make a normal progress on a comparatively modest budget; the budget of last year is practically as small as should be provided for its use. It is hoped that eventually all of the medical literature in this parish can be combined in one place and administered from one source, and work to this end is constantly going on.

It is highly desirable, in fact it is necessary, if these broader plans are ever to be put into effect, that a fire-proof library be provided. Donations to the library are constantly being made by members and other well-wishers, and the appreciation of the society is very deep for such gifts.

The affairs of the library, which are of vital interest to the membership, will be thoroughly handled by Dr. Silverman, the new librarian.

The welfare of the Charity Hospital is one of the dearest wishes of the Society, and they have gone on record as opposed to political influences in that institution. This should always be our policy, as politics can only mar that splendid institution. The present administration of the hospital has been practically free from politics, and the vestiges of such influences are being gradually

gotten rid of. That administration has been so satisfactory in all respects, and so considerate of the profession, and of its duties to humanity, that it is our sincere hope that the political powers will leave it essentially undisturbed. I believe it to be our duty to work to this end.

I am reliably informed that another effort is to be made by certain unrecognized sects to have their own special board of medical examiners, and that they are anxious to gain a foothold in this state. The society will back the Board of Medical Examiners to the utmost in their fight to prevent such an unfortunate occurrence.

We can feel that the present Board of

Medical Examiners is fully alive to its duty and vigilantly guards the best interest of the legitimate profession.

We are to have the honor during the next year of entertaining the Southern Medical Association. I know that we will prove ourselves worthy of the reputation which all inhabitants of the Crescent City have as hosts, and that when the Southern Medical leaves New Orleans, it will do so with the wish to return soon again.

In conclusion, this administration will feel that it has done well if it can protect the natural growth of this old society.

I thank the members for the honor they have bestowed upon me.

## ANNUAL REPORT OF SECRETARY.

—  
Dr. Lucien A. Ledoux.

*To The Officers and Members of the Orleans Parish Medical Society:*

From every view-point the Society has had a most successful year. Much progress has been made and the foundation laid for future development and expansion.

I wish to summarize as briefly as possible, some of our activities, leaving to the other Officers and Committees, to more fully develop in their reports the work accomplished during the past year.

Several important matters, not only of medical interest, but of Civic interest as well, were presented to the Society and a record of the action taken is as follows:

The endorsement of the Charity Hospital Appeal.

The endorsement of the Charity Hospital Visiting Staff Resolution addressed to the candidates for Governor.

The endorsement of the resolution in regard to Hospital Abuse.

The endorsement of the Derby Tract for the Tuberculosis Hospital.

The endorsement of the Association of Commerce resolution in regard to the collection and disposal of garbage.

The endorsement of a resolution in regard to the objectionable tax feature of the Harrison Narcotic Act.

Finally, a resolution which resulted in securing for this city the 1924 meeting of the Southern Medical Association.

The Society was represented on the Paving, Zoning and Milk Commissions of this city, and in numerous other ways made its influence felt for the betterment of Civic Conditions and Public Health.

The Board arranged with Mrs. Gertrude Durr Pic for scientific reports and discussions of our Scientific Meetings. This action is progressive and was badly needed.

I have attempted to estimate the attendance of our meetings.

Average attendance . . . . . 65

Average members attending . . . 50

The Society held 25 meetings during the year. Of this number 13 were Scientific Meetings, 4 Special Meetings, 3 Clinical Meetings, 1 Installation Meet-

ing, and a Joint Meeting with the First and Second District Dental Society.

The Board of Directors held 14 meetings during the year, 2 of which were special meetings.

A Publicity Committee was appointed to take care of news items and matters of medical interest to the public, and have been able to secure the co-operation of the newspapers in presenting this material in its proper light.

The Society is co-operating with the Public Health Committee of the American Medical Association, and a monthly radio health talk over the Tulane University Station has aroused popular interest.

Due chiefly to the tireless efforts of the Chairman of the Scientific Essays Committee, Dr. P. Graffagnino, the usual high standard of our Scientific Meetings was maintained. The programs were of unusual merit and in addition to the papers presented by members, the Society had the pleasure of meeting and hearing several invited guests who occupy high positions in the Medical World. It is of interest to note that of the 39 scientific papers read during the year, 8 were presented by members reading their first medical paper.

The distinguished guests of the Society were as follows. Dr. T. W. Brophy, Prof. Hans Finsterer of Vienna, Sir Thomas Oliver, M. D., of Glasgow; Dr. Wm. Sharpe of New York and Dr. R. E. House of Ferris, Texas.

The Monthly Bulletin of the Society recently inaugurated and appearing in the monthly issue of the New Orleans Medical and Surgical Journal should serve to give the membership an intimate knowledge of the workings of the Society. There has been an appreciable gain in membership. A total membership January 1st, 1924, was 450 net. Applications are pending to the number of 3. Losses to the Society by deaths, delinquency, etc., total 22. Dr. G. Farrar Patton was elected to Honorary Membership on January 14th, 1923, after serving the Society as an active member for over thirty years.

Steps were taken during the past year that will culminate this year in our signing a contract with the New Orleans Medical and Surgical Journal for the publication of our proceedings. In

the past only a verbal agreement has existed.

Three amendments to the by-laws were passed.

1. Constituting the Board of Directors, the Membership Committee.

2. All committees are empowered to act on their own initiative as well as having matters referred to them.

3. The President is empowered to appoint annually as a new standing committee, the Committee on Finance. The Treasurer ipso-facto becomes a member of all committees that has to do with the disbursement of funds.

The Judiciary Committee, Public Health Committee, Hospital Abuse Committee and the Committee on Criminal Abortion met during the year to consider matters referred to them. There was one application for Medical Defense, which was referred to the proper committee.

The Society lost by death several of its oldest members. Dr. Sidney Delaup and Dr. John Callan were at one time Presidents, the former was also a charter member.

The following delegates and alternates to the Louisiana State Medical Society were elected November 12th, 1923:

Delegates—Dr. E. L. Leckert, Dr. Wm. Seemann, Dr. Homer Dupuy, Dr. C. G. Cole, Dr. Chas. Chassignac, Dr. J. R. Hume, Dr. J. Signorelli, Dr. J. A. O'Hara.

Alternates—Dr. P. Graffagnino, Dr. W. W. Leake, Dr. A. O. Hoefeld, Dr. F. R. Gomila, Dr. A. E. Fossier, Dr. T. J. Dimitry, Dr. M. J. Lyons, Dr. G. F. Roeling.

The office personnel has been reorganized and the physical condition of the property improved as much as possible. Following the resignation of Miss Elizabeth Dillon as Assistant Secretary-Treasurer, Miss Lucille Maier was appointed to succeed her. The office work is now done separate from that of the Louisiana State Medical Society. This arrangement is more satisfactory to all concerned. Greater smoothness and efficiency in the work of the office has been accomplished by the institution of form letters, quarter calendars in ad-

vance, etc. After studying the needs and the work of the Society during the past year I wish to submit a few recommendations:

1st. That the Society adopt as their Code of Ethics the Code of the American Medical Association. At present, questions of ethics are determined by the committee, and represent largely their own opinions.

2nd. A return to the old Membership Committee plan. The present election of candidates by the Board of Directors with the Secretary furnishing proof of licensure from the State Board of Medical Examiners, seems to be more or less perfunctory at best. I feel that the best interests of the Society would be served by this Membership Committee functioning as in the past, allotting to the Board only the formality of acceptance or rejection.

3rd. Amendment to the by-laws to allow for the suspension of membership upon written application. Frequently through prolonged illness, service on special medical commissions, and through absences of a temporary character a member forfeits his membership for non-payment of dues.

4th. Our by-laws require that papers read before the Society be turned over to the Secretary after the reading. Though familiar with this rule, several members have disregarded it. A penalty, as enforced by the State Society, with a request that all papers be typewritten would be very beneficial.

These accomplishments are the result of the work and energy of your Board of Directors. To them, the chairmen of committees, and the membership at large I am grateful for the co-operation and help they have given me.

Miss Maier, though handicapped in the beginning by inexperience, has in time measured up to the responsibilities of her office, and has proved a loyal and efficient Assistant Secretary-Treasurer.

In closing I wish to thank the membership for the opportunity they have given me to serve the Society. I am deeply appreciative of the compliment paid me by my re-election, and I expect in the coming year to give my best efforts to the betterment of the Society.



## ANNUAL REPORT OF LIBRARIAN.

Through the quarterly reports of the librarian, the membership is already informed of the approximate status of its library. For that reason, the present report is made as brief as is consistent with giving you full cognizance of the work of the year 1923. Many details which are omitted in the body of the report are given in full by attached memoranda.

The work of the year has carried the organization of the library well on to completion. Four thousand two hundred books have been added to the records. Of these, 133 were received by gift from the New Orleans Medical and Surgical Journal, 131 were added by purchase, 115 by binding, and 167 by gift. This brings the total number of books as shown in the completed record to 9,600 volumes. There remain approximately 1,000 more. All of these are from the old Charity Hospital collection, the dates ranging from 1750 to 1865.

As authorized by the Library Committee, the evening hours of opening were discontinued on May 31st. In September, Tulane University asked permission to resume the evening hours at their own expense, because of the use made of the Library by the Medical School. This permission was granted by the Society, and the Library has been open from 7 to 10 six evenings each week, a senior student being in charge.

The Library has been the recipient of gifts from the following persons: Dr. P. B. McCutcheon, Dr. J. A. Lanford, Dr. A. L. Johnson, Dr. A. E. Fossier, Mr.

Fung y Figueras, and the Eye, Ear, Nose and Throat Hospital.

The Library Committee met twice during the year, February 2nd, and December 12th. The attendance of the members of the committee was excellent, their interest unabating, their advice invaluable, and the Librarian wishes to express his most sincere thanks to them for their friendly attitude and kind co-operation.

It has seemed fitting to me to prepare and present to the Society at this time a summary of funds received and expended since the beginning of the Library's organization in 1920.

Three of the items of expenditure here entered (moving library, salaries, accident) are no longer included in our budget. As is here shown, the funds of the Library on January 1st, 1924, amounted to \$283.97, saved from the Library's income for the current year, for investment in the Library Endowment Fund. This being the first normal year since the reorganization began, shows the income of the Library as budgeted by the Society to be sufficient for current needs.

It is therefore a particular gratification to me in retiring from the office of librarian, to report the normal growth of the library to be financially cared for by its present income. With the reorganization practically completed, the entire resources of the Library, as well as the full time of the Assistant Librarian are at the service of the medical profession as never before.

This report would not be complete should I fail to thank Miss Marshall, the Assistant Librarian, for her excellent work. If the Library meets with your approval, it is largely due to her untiring efforts.

## NEWS AND COMMENT

"Every man owes some of his time to the upbuilding of the profession to which he belongs."  
*(Theodore Roosevelt)*

Elsewhere in these columns it will be noted that the Mississippi State Medical Association has adopted this Journal as their official organ. It is hoped through the medium of this section of the Journal to keep the medical profession of both states in touch with their activities.

American Medical Association.

The following officers were elected for 1924-1925:

President-Elect—William D. Haggard, Nashville, Tenn.

Vice-president—E. B. McDaniels, Portland, Ore.

Secretary—Olin West, Chicago.

Treasurer—Austin A. Haygen, Chicago.

Speaker House of Delegates—Fredrick C. Warnshuis, Grand Rapids, Mich.

Vice-Speaker House of Delegates—Rock Sleyster, Wauwatosa, Wis.

Board of Trustees—Term expires 1927: Edward B. Heckel, Pittsburgh, Pa.; Thomas McDavitt, St. Paul, Minn.; term expires 1928, J. H. Walsh, Chicago.

Judicial Council—M. L. Harris, Chicago.

Council on Medical Education and Hospitals—Merritt W. Ireland, Washington, D. C.

Scientific Assembly—F. P. Gengenbach, Denver, Colo.

The House of Delegates expressed itself as favorable to Atlantic City as the place of the next annual session.

Dr. Urban Maes of New Orleans was appointed as Chairman of the Committee on Awards of the Scientific Exhibit.

Dr. Oscar Dowling of Shreveport was elected as Chairman of the Section on Preventive and Industrial Medicine and Public Health.

The following Louisiana physicians attended the American Medical Association meeting.

Drs. Chas. A. Bahn, New Orleans; S.

C. Barrow, Shreveport; S. M. Blackshear, New Orleans; Oscar Dowling, Shreveport; Theodore Engelbach, Grand Isle; M. Feingold, New Orleans; L. A. Fortier, New Orleans; M. H. Foster, Alexandria; H. B. Gessner, New Orleans; Amedee Granger, New Orleans; George Kreeger, Lake Charles; Rudolph Matas, New Orleans; H. E. Menage, New Orleans; F. W. Parham, New Orleans; P. L. Perot, Monroe; S. M. Scott, Oakdale; W. M. Seemann, New Orleans; D. N. Silverman, New Orleans; S. K. Simon, New Orleans; John Smyth, New Orleans; A. J. Thomas, Shreveport; M. T. Van Studdiford, New Orleans; H. W. E. Walther, New Orleans; J. J. Wymer, New Orleans; J. M. Bamber, New Orleans; Elizabeth Bass, New Orleans; S. M. D. Clark, New Orleans; Joseph A. Danna, New Orleans; E. D. Gardner, Clarks; I. I. Lemann, New Orleans; Urban Maes, New Orleans; P. B. Salatich, New Orleans; E. C. Samuel, New Orleans; A. M. Caine, New Orleans; J. Cirino, New Orleans; Isidore Cohn, New Orleans; Henry Daspit, New Orleans; L. R. DeBuys, New Orleans; Homer Dupuy, New Orleans; John H. Graff, New Orleans; J. Birney Guthrie, New Orleans; J. T. Nix, New Orleans; Willis P. Butler, Shreveport; Earl C. Ferguson, Clayton.

The following Mississippi physicians attended the American Medical Association meeting:

Drs. Henry Boswell, Sanatorium; C. C. Buchanan, Hattiesburg; T. M. Catching, Hazlehurst; S. E. Duniap, Wiggins; E. H. Galloway, Jackson; L. S. Gaudet, Natchez; C. F. Gilbert, Corinth; J. D. Green, Brooksville; L. S. Greene, New Site; R. W. Hall, Jackson; Wm. S. Hamilton, Jr., Jackson; S. W. Johnston, Vicksburg; J. H. McLain, Jackson; W. W. McRae, Corinth; A. G. Payne, Greenville; E. L. Posey, Jackson; M. W. Rainold; Gulfport; J. C. Rice, Natchez; H. R. Shanss, Jackson; W. H. Sutherland Booneville; N. C. Waldrep, Tishomingo; W. A. Watson, Booneville; W. C. Brewer, Columbus; H. A. Gamble, Greenville; E. L. Gilbert, Electric; W. S. Leathers, University; A. W. Rhyne, Coahoma; Augustus Street, Vicksburg; R. L. Turner, Meridian; E. T. White, Greenville;

M. L. Flynt, D'Lo; John W. Barksdale, Jackson.

### *Opelousas Meeting*

The Opelousas meeting was one of the best attended conventions held outside of the city. Ample accommodations were provided for all, and the entertainment to say the least was lavish. The papers offered were of a high standard, and the attendance very large from west and south Louisiana, with a goodly representation from the northern part of the state. Many of the members enjoyed a pleasant motor trip from New Orleans to Opelousas, with excellent roads all the way. The wonderful program of St. Landry has set a high mark for successful meetings in the future.

Without wishing to detract from the splendid meeting, it was noted that too many of our members went to Opelousas and read papers "between trains." These meetings are sufficiently attractive to justify spending the three days allotted to it.

From press dispatches, the key-note of the President's address of the American Medical Association seems to have been an endorsement of birth control. Coming as it does from the head of the Medical profession, and having been given the widest publicity, the wisdom of such an utterance at this time, to say the least, is debatable.

### *Legislation*

The following bills introduced in the Legislature are of interest to the medical profession.

The two bills relative to the Charity Hospital of New Orleans, one concerning Overlapping Terms for its Board of Administrators "depoliticalization;" the other Hospital Abuse. These bills are made to read to cover all Charity Hospitals in this state, and have the endorsement of the Visiting Staff and the Orleans Parish Medical Society and L. S. M. Society.

The bill to amend the medical practice act (Chiropractic Bill).

A bill requiring health certificates from male applicants for marriage licenses.

The Sheppard-Towner Maternity Bill.

From the newspapers we learn that the Board of Administrators will fight the Hospital Abuse Bill as drafted by the Staff members, who have had long connection and experience in the Hospital. The original grant from Jean Baptiste and Don Almonaster specifically stated that the hospital was founded for the poor and needy. The act has since been amended, and today anyone who applies, either rich or poor, must be treated. The bill as introduced calls for control of admissions, and primarily effects a saving to the tax payers of this state by eliminating those who are able to pay and can be treated elsewhere, and in addition will diminish the crowded conditions of its wards and clinics. As conditions exist today, we partly agree with one of the Board members "the name of Charity should be removed from its front door," for it is no more a simple Charity, but an imposition and a step toward state medicine. That interests you.

Thanks to the efforts and watchfulness of the older members of the profession, the medical practice act of Louisiana, called by prominent medical men throughout the country "the model act", has again met and stood the test. The two Fife brothers, Chiropractors, so called "spinal masseurs", were recently convicted in this city for violating the provision of the medical law. These two Chiropractors are sponsoring a bill in the Legislature, which calls for an amended act allowing of the formation of a separate Board of Chiropractor examiners.

An article appearing in the Times Picayune of June 16th, at great length explains the decision rendered by Judge Byrnes against the Fife brothers, and stated that they were not found guilty of being charlatans, but simply of practicing medicine without a license. In the beginning of the article the Fife brothers state that they were not practicing Chiropractics, but were spinal masseurs. Further along in the article it stated that they had graduated from a three year course of a School of Chiropractics! During the trial the issue was a question of law violation. The matter of charlatanism and Chiropractic training did not enter into it at all.

The Legislative Committees of the State Society and of the various Parish Societies, in conjunction with medical men throughout the State, have been actively preparing to combat any amendment of the medical practice act. Resolutions have been adopted by Medical Societies over the State, and very effective work has been done preparatory to the hearing before the Committee on Health and Quarantine. The Orleans Parish Medical Society adopted a set of resolutions which were immediately wired to each member of the Legislature. The medical profession of the State meets the issue fully prepared.

The bill requiring a health certificate for marriage license has been introduced, and is being supported by individuals.

The Sheppard-Towner Maternity Bill introduced by individuals has the backing of social agencies throughout the State. The medical profession has taken no definite stand in this matter, the chief opposition coming from social workers and mid-wives.

At this writing the House Bill number 288 "Chiropractic Bill" has received a unanimous unfavorable report from the Committee on Health and Quarantine.

The following physicians appeared before the committee and actively opposed the bill:

Drs. L. J. Menville, Paul J. Gelpi, B. A. Ledbetter, W. H. Seemann, Oscar Dowling, C. V. Unsworth, C. C. Bass, G. Roeling, R. B. Harrison and P. T. Talbot of New Orleans; Dr. C. F. Gelbke, of Gretna; Dr. L. J. Williams, of Baton Rouge; Drs. S. B. Wolf and Lionel Bienvenue, of Opelousas; Dr. J. E. Knighton, of Shreveport, and Dr. R. McG. Carruth, of New Roads.

The Sheppard-Towner Maternity Bill with an appropriation, has also been rejected by this committee.

The Senate Health and Quarantine Committee has approved a bill regarding the Charity Hospital of New Orleans and providing for overlapping terms for its Board of Administrators. The Hospital Abuse Bill is still in the committee and is presently the subject of contro-

versy between the Board and representatives of the Visiting Staff.

Mr. T. Semmes Walmsley, former Assistant Attorney-General, who for the past four years has represented the State Board of Medical Examiners in all matters, particularly pertaining to the trials of various suits against Chiropractors has rendered valuable assistance to our Legislative Committees and attended the hearings at Baton Rouge.

Narcotic tax and renewals are due July 1st, 1924.

Meeting of Mississippi State Medical Association. The next Annual Meeting of the Mississippi State Medical Association will be held in Biloxi, May 12th, 13th and 14th, 1925.

The first annual meeting of the American Association for the Study and Cure of Cancer will be held at the Drake Hotel, Chicago, Ill., June 11th, 1924, at 10 a. m.

Monthly Bulletin of the Shreveport Medical Society, June 1924.

June meeting of the Shreveport Medical Society, June 3rd, at Charity Hospital at 8 p. m.

June Scientific Program by Ouachita Parish Medical Society. Papers by Drs. Vaughn, Wright and Adams, the subjects for which have not been announced as this goes to press.

July Scientific Program by Drs. Pirkle, Williams, Harris and Green. Subject: The Female Pelvis.

Surgery of the Tubes and Ovaries, Dr. L. H. Pirkle.

Caesarian Section, Dr. T. E. Williams.

Female Pelvis from a Urological Standpoint, Dr. E. W. Harris.

Extra-Pelvis Symptoms Due to Pelvis Pathology, Dr. H. L. Green.

Toxemias of Pregnancy, Dr. W. B. Heidorn.

Ectopic Gestation, Dr. S. W. Boyce.

The above papers will be limited to ten minutes, with discussion limited to five minutes.

Charity Hospital, May 6th, 1924.

The regular monthly meeting of the Shreveport Medical Society was called to order at 8:05 by President Butler. Thirty-three members were present.

Written communications.

A letter was read from the secretary of the State Society calling attention to his instructions to write the presidents of the local societies requesting that a representative be selected to go to Baton Rouge to assist the committee in the fight against the Chiropractors.

### *Scientific Program.*

Schumpert Staff had charge of this part of the program. The subject was Symposium on Cancer.

Dr. J. J. Frater told of the History and Theories of Etiology.

Dr. C. B. Erickson talked on Diagnosis and Treatment of Surface Cancer.

Dr. J. S. Knighton discussed Cancer of the Digestive Tract.

Dr. W. R. Harwell illustrated his talk on X-ray of the Stomach.

Dr. C. W. Willis discussed Carcinoma of the Cervix.

Dr. B. C. Garrett discussed Cancer of the Breast.

Dr. S. C. Barrow talked on Radiotherapy of Uterine Cancer.

Dr. Dowling presented cancer statistics for Louisiana for the years 1922 and 1923. General discussion by Drs. Hirsch, Herold, W. S. Kerlin, Barrow.

There were no clinical cases.

Dr. Bodenheimer made a motion, which was seconded and passed, that Dr. Knighton be appointed to represent this Society at Baton Rouge to fight Chiropractor legislation.

Dr. Herold was appointed to represent the Society at the Anti-Tuberculosis League meeting May 12th.

Dr. D. I. Hirsch, president of Ouachita Parish Medical Society, made the proposal that this Society and the Ouachita Parish Medical Society exchange programs once a year; that is, each society get up its program and have the speakers present it to the other society.

Dr. Knighton made a motion that this Society get up a program and give it at the next meeting of Ouachita Parish Medical Society, which will be the first Wednesday in June, the 4th, this date being agreeable to that Society. The motion was seconded by Dr. Sanderson and passed.

Dr. Barrow made a motion that the Society delegate Dr. Sanderson to select a second member to put on the program at Monroe on May 7th. It was suggest-

ed that Dr. Gowen be asked to be the second member.

It was announced that the Fourth District Medical Society will meet at Charity Hospital, Thursday, May 8th, at 6:30 p. m.

On motion the Society adjourned.

ROBERT T. LUCAS,  
Secretary.

The South Mississippi Medical Society held a meeting in Hattiesburg, Miss., on June 12th. A number of our Louisiana doctors had the pleasure of attending. The following physicians of New Orleans were on the official program: Dr. A. L. Whitmire, Dr. T. B. Sellers, Dr. Jerome Landry, Dr. R. M. Van Wart, Dr. C. J. Bloom, and Dr. P. Jorda Kahle.

On May 29th, the Washington Parish Medical Society held its regular monthly session at the Pine Tree Inn, Bogalusa.

At 8 p. m. a luncheon was served, and after same the regular program was taken up as follows:

"Obstructions of the Ureter," by Dr. R. R. Ward, Bogalusa, La. Discussion opened by Drs. Saunders and Lafferty.

"Hyperemesis Gravidarum," by Dr. J. B. Thompson, Isabel, La. Discussion opened by Drs. Berwick and McNeese.

"Contacts and Carriers in Communicable Diseases," by Dr. F. Michael Smith. Discussion opened by Drs. Pierce and Davidson.

Industry is neglecting the eyes of the workers, called a leading factor in national production, it is asserted by the Eye Sight Conservation Council of America, which bases its conclusions upon a survey embracing 170 companies located in twenty-three states and employing more than 1,000,000 men and women.

Meeting of the American Protologic Society will be held on June 23-25, 1924. Headquarters, New York Academy of Medicine, New York, N. Y.

*To Seek Fewer Sizes of Hospital Beds.*

Officials of more than 75 hospitals and of an equal number of national district or state hospital associations have been invited to attend a meeting on Tuesday, June 3, in the Division of Simplified Practice, Department of Com-

merce. The purpose of the meeting is to consider specific recommendations as to what dimensions should be adopted as standard in future purchases of hospital beds, and to overcome the present wide diversity in sizes.

#### Monthly Meetings in New Orleans.

Orleans Parish Medical Society, second and fourth Mondays of each month.

Charity Hospital Staff will meet Monday night, June 23rd, 1924.

Touro Infirmary Staff will not hold any meetings until the fall.

The regular clinical meeting of the Clinical Society of the Presbyterian Hospital is held monthly on the last Thursday in the Corinne Casanas Clinic Building, at 8 p. m.

Hotel Dieu Staff met on June 16th, and heard a very interesting illustrated lecture by Dr. Levin on Gastro-Intestinal Diseases. Dr. Louis Levy showed his recently invented apparatus for local anesthesia, the fluid injection being introduced by means of compressed air. The Staff will adjourn until September.

#### PUBLICATIONS RECEIVED.

P. Blakiston's Son & Co., Philadelphia: "*Manual of Histology*," by Henry Erdmann Radasch, M. Sc., M. D. "*Insanity and Law*," by H. Douglas Singer, M. D., M. R. C. P., and William O. Krohn, A. M., M. D., Ph. D.

W. B. Saunders Company, Philadelphia and London: "*Operative Surgery*," by Warren Stone Bickham, M. D., Phar M., F. A. C. S., Vol. IV.

Funk and Wagnalls Company, New York and London: "*Tuberculosis: Nature, Treatment, and Prevention*," by Linsly R. Williams, M. D. "*The Expectant Mother, Care of Her Health*," by R. L. DeNormandie, M. D. "*Veneral Diseases*," by William F. Snow, M. D. "*Love and Marriage*," by T. W. Galloway, Ph. D.

C. V. Mosby Company, St. Louis: "*The Science and Art of Anesthesia*," by Colonel William Webster, D. S. O., M. D., C. M. "*The Treatment of the Common Disorders of Digestion*," by John L. Kantor, Ph. D., M. D.

The MacMillan Company, New York: "*Hospital Organization and Operation*," by Frank E. Chapman, Director, Mount

Sinai Hospital of Cleveland. "*First Steps in Organizing a Hospital*," by Joseph J. Weber, M. A.

Paul B. Hoeber, Inc., "*Management of Diabetes*," by George A. Harrop, Jr., M. D. "*Diabetes*," by Philip Horowitz, M. D. "*Transactions of the American Protologic Society*," Twenty-fourth Annual Session, held at Hotel Alexandria, Los Angeles, Cal., June 22nd and 23rd, 1923.

Miscellaneous. "*Two Lectures on Gastric and Duodenal Ulcer*," by Sir Berkeley Moynihan. "*The Johns Hopkins University Circular for 1924-1925*." "*Tuberculosis, a Family Problem*," by John C. Gebhart.

Washington Government Printing Office: "*United States Naval Medical Bulletin*, May, 1924. "*Public Health Reports*, Vol. 39, Nos. 18, 19, 20. "*Public Health Reports*, Vol. 38, Part 2, "*Public Health Reports*, Vol. 38, Part 2, Nos. 27-52, July-December, 1923.

#### BOOK REVIEW.

International Clinics, Volume 4, Thirty-third Series, 1923. J. B. Lippincott & Company, Philadelphia and London, 1923.

The current number is commendable for the multiplicity of its subjects and the clarity of their presentation. The questions considered are most diversified. They are taken from nearly every department of medicine. First, we plod through a heavy discourse on gastric or duodenal ulcers. Later on, in mental recreation, we are refreshed with a light study on the interpretation of dreams. The symposium on gastro-intestinal ulcers is especially meritorious. Matthew J. Stewart, M. B., Ch. B., London, gives a review of 6,800 autopsies. The inferences are finely drawn, the conclusions are accurate and convincing. The paper does credit to the scholarly teaching of the master, Sir Berkeley Moynihan, at whose instigation the work was undertaken. The treatise by Seale Harris, "*The Early Diagnosis of Gastric and Duodenal Ulcers*," is most enlightening and clears up many obscure points. The short papers with case reports, illustrate a variety of unusual conditions. The paper "*Prophylaxis for Medical Fads*," by James J. Walsh, might well be styled, Physician See Thyself. It is a satire on the doctor, a scrupulous, X-ray analysis of the faulty practices in medicine—the riding of hobbies, the disease of the following of fashions. In the burst of enthusiasm, remedies are vaunted to the skies—later they are hopelessly relegated to the garrets of disuse. The general tenor of the papers, individually and collectively, is instructive and interesting.

The volume is thoroughly edited and supplies much valuable information to the general practitioner and specialist alike.

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Owned and Published by THE LOUISIANA STATE MEDICAL SOCIETY

OFFICIAL ORGAN MISSISSIPPI STATE MEDICAL ASSOCIATION AND ORLEANS PARISH MEDICAL SOCIETY

\$2.00 per Annum, 25c per Copy  
Volume 77, Number 2

AUGUST, 1924

Published Monthly in New Orleans  
at 1551 Canal Street

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Next Annual Meeting Louisiana State Medical Society, New Orleans, April 21-23, 1925  
 Next Annual Meeting Mississippi State Medical Association, Biloxi, May 12-14, 1925  
 Next Annual Meeting Southern Medical Association, New Orleans, Nov. 24-27, 1924

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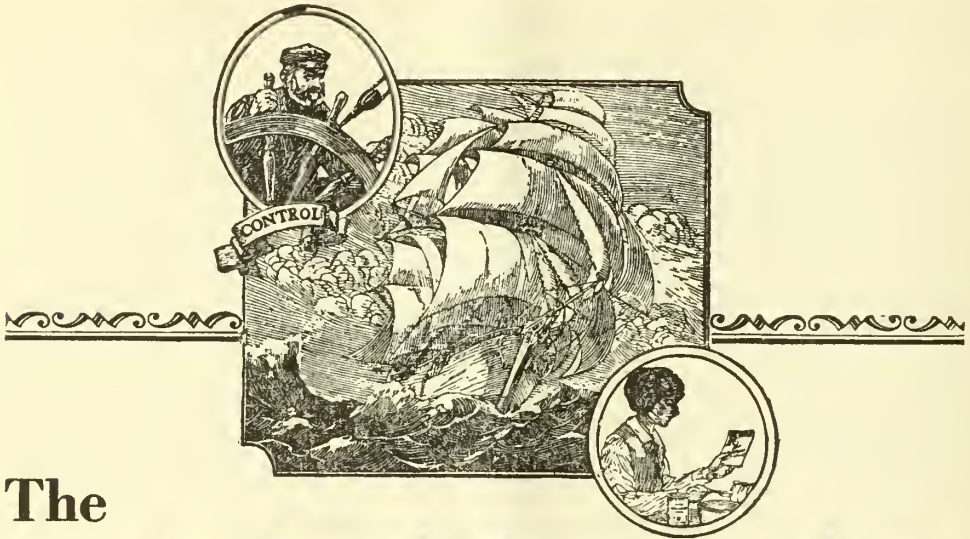
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Vol. 77

AUGUST, 1924

No. 2

## THE REDUCTION OF SURGICAL MORTALITY.\*

WALTER E. SISTRUNK, M.D.

*Division of Surgery, Mayo Clinic, Rochester, Minn.*

Surgery of the present day has slowly evolved from the painstaking studies of many generations of surgeons. Practically everything that was known concerning the art prior to the introduction of anesthesia and asepsis, however, is now obsolete, and surgery as practiced today may be regarded as an art which has developed since that time. As far back as 3,000 years ago are records of surgery of a crude nature, but its practice at that time was devoted largely toward efforts to heal wounds. Hippocrates, who lived four centuries before the birth of Christ, must have been a wonderful surgeon in his day, and his teachings and writings have been handed down from generation to generation to the present time. For about 500 years following his death, surgical science made little progress.

At this time Galen, through his dissections and studies in physiology, became a noted surgeon, and his teachings were broadly scattered. He discovered the true function of arteries and learned that blood instead of air flowed through blood vessels. His teachings were followed for over 1,300 years, and little of note was added during this time.

There existed through this period physicians, surgeons and barber surgeons. The physicians were the great men of the profession, while the barber surgeons occupied the lowest position. The surgeons who were better educated than the barber surgeons occupied an intermediate position between the two. There was much discussion between these groups, and it required centuries for the more intellectual and better educated surgeons to separ-

ate themselves from the barbers, and to establish surgery on a broader and more scientific basis.

The teachings of Galen were followed until the sixteenth century, when Versalius and Paré, through their studies in anatomy and physiology, did much to put surgery on a firmer basis. Paré brought out a method of controlling hemorrhage in amputations by means of ligatures. From then to the nineteenth century studies in anatomy, histology, chemistry, physiology, pathology, and embryology were carried on and the uses of the microscope, in a limited way, were made known.

On account of the great horror which patients had of operations, because of the pain experienced and the great danger of infections, only such surgery as was absolutely necessary was advised. Many people died from infections from even simple operations. About the middle of the nineteenth century, ether anesthesia was introduced almost simultaneously by Long and Morton, and operations which previously had been rare became much more common. In the Massachusetts General Hospital, for instance, where an average of three operations had been done each month for the five years previous to the introduction of anesthesia, the number of operations increased so rapidly that during the five years immediately following the introduction of anesthesia nearly three times as many operations were performed, and in the same hospital, fifty years later, one hundred times as many operations were performed annually as before anesthesia was introduced.

About twenty years after the introduction of anesthesia, Lister advanced ideas regarding bacteria as a cause of infection. His ideas were based partly on Pasteur's experiments, showing that putrefaction was due to the action of micro-organisms. An entirely new era in surgery began. Although Lister's work was scorned and laughed at by many for a number of years,

\*Annual oration before the Mississippi State Medical Association, Jackson, Miss., May 13-14, 1924.

it was gradually accepted, and through his suggestions it became possible to perform operations which hitherto had been impossible. Aseptic surgery followed Lister's antiseptic surgery.

The surgeons of the generation which followed Lister, and the one which has just preceded our own, through the introduction of anesthesia and aseptic surgery, had opened to them great possibilities which they seized and made good use of, and they may be looked on as the surgeons largely responsible for the development of our present day technic. Not only did they develop aseptic technic and the technic of many of the operative procedures which are used today, but through their studies of pathology in living tissues they were able to make deductions of great value in treating surgical diseases. Prior to their time, much concerning pathology had been learned from the examination of dead bodies after the terminal changes coincident with death had occurred. The awakening of this new era in surgery brought about closer cooperation between surgeons and physicians which caused closer study of surgical diseases and led to the better handling of patients from a surgical standpoint. The increase in the amount of surgery led to the building of many hospitals which furnished surgical training for students. The discoveries in medicine, the increase in laboratory facilities and the development of training schools for nurses, all helped to advance the art. The recent organization of the American College of Surgeons with the great efforts it has made toward hospital standardization, its suggestions regarding closed hospital staffs, and the study of all deaths occurring in hospitals, have further tended to elevate the standing of the surgical profession.

The majority of men who practise surgery at the present time have been trained through actual experience under good surgeons, and are capable of doing high class work. The technic for the performance of various types of operations has been largely standardized, and it remains for the present generation to improve such technic, further, and to develop methods which will make surgery safer. An occasional surgeon will make some great discovery which will make his name immortal, but to the great mass of us this will not happen, and our efforts must be directed along lines which will improve the results through surgery, in certain diseases which still have not been thoroughly mastered, and toward making surgery safer. It is with

this idea in view, and with the hope of bringing out some points which I feel are of value in reducing surgical mortality, that I have chosen my subject.

It is to be assumed that the highest type of work can be done only by men who are well trained. Surgeons who are not well trained, or who have never acquired the skill necessary to perform operations rapidly and accurately should either make efforts to improve their ability or take up other lines of work. Certainly with the opportunity for training which is now offered, no one should attempt surgery on human beings until the long training necessary to master this art has been obtained. It is possible to acquire much of the skill and accuracy necessary to do good surgery through the daily use of instruments, outside the operating room. A dexterity may be acquired in this way which might never be developed through operating on human beings alone. The continued performance of a single act increases one's speed and accuracy. Beautiful examples of this are seen in the high class base-ball player or the great musician. Their accuracy and skill is remarkable, but when one stops to consider the great number of hours of daily practice necessary to have acquired such skill, it can be easily seen why they overshadow their rivals. Operations which can be rapidly and accurately performed certainly are less dangerous than similar operations slowly and badly performed. Again, a surgeon may be well trained in certain lines and still have little training in others, and operations performed by one not particularly skilled in a particular line of work are less likely to be followed by satisfactory results. The conscience of the surgeon, his honesty and his desire to give his patients the best advantages when a serious operation is being considered, are the factors that must guide him as to whether or not he or some one else can more safely perform the operation contemplated.

The question of judgement as to when an operation is necessary, and as to what type of operation should be performed is developed only through study, experience and keen observation, and on this rests, to a great extent, the success of one practising surgery.

It is gradually being realized that operations may be more safely performed in many instances by preliminary preparation of patients, and by dividing certain operations into stages, and I feel that

when these points are more thoroughly appreciated there will be a further reduction in surgical mortality.

In thyroid surgery for instance, it has been proved that the mortality in cases of hyperthyroidism may be considerably reduced by preparing patients properly for the operation. Patients with simple goiters without hyperthyroidism, who are in a good physical condition, do not need preparation, and unless the operation is contraindicated through some organic disease, it may be safely performed at any time. In cases of exophthalmic goiter it has been shown by Plummer during the last two years, that it is possible, through preliminary treatment which consists of a certain amount of rest and the administration of iodine, practically to eliminate the possibility to perform primary thyroidectomy is of Such treatment so improves patients that within a space of one to three weeks the greater number may safely have primary thyroidectomies. Following such treatment the nervousness largely disappears, the pulse and metabolic rates drop, the weight loss stops, and many patients begin to gain in weight. While it has been necessary previously, in dealing with this disease, to perform many preliminary ligations, they are now rarely performed. From an economic standpoint, and from the standpoint of the benefit gained by diminishing the degeneration which occurs in the vital organs of the body during the period of active hyperthyroidism, the ability to perform primary thyroidectomy is of enormous value. After such patients have been carefully prepared and selected for operation, an operative technic should be used which will diminish as much as possible the possibility of a serious postoperative complication, such as dyspnea, secondary hemorrhage, bronchopneumonia or wound infections in patients who are seriously ill, as many of the patients who die are those who are seriously sick and have postoperative complications. The death rate following thyroidectomy in cases of exophthalmic goiter has been reduced to a point below 1 per cent. Unfortunately, hyperthyroidism associated with adenomatous goiters does not respond to this treatment, but much is to be gained by resting such patients before operation, and attempting to improve the condition of a decompensated heart. When one compares the mortality following such methods of treatment with that which followed early surgery on the thyroid, the difference is astounding. In cases of exophthalmic

goiter operated on early, the mortality varied from 25 to 40 per cent, and even until recently it has been difficult to reduce this mortality below 3 or 4 per cent.

Much has been gained also by the preparation of patients with diabetes mellitus for whom operations are necessary. For a long period the mortality following operations in such cases was about 30 per cent. Even before the discovery of insulin it became known that when such patients were prepared properly by dietary measures, the mortality could be considerably diminished. Berkman was able to show a reduction in mortality to 6 per cent by such measures. Since the advent of insulin it has been possible through the proper preparation of the patient by dietary measures and the administration of insulin before and after operation, as indicated, to operate, as Wilder has shown, with almost as much safety on the majority of patients with diabetes mellitus as on normal persons. This is a great gain, as it happens not infrequently that patients with diabetes mellitus suffer from definite surgical conditions which should be operated on.

In gastric surgery Berkman has shown that the mortality is considerably higher in operations performed in the presence of obstructions, such as may be produced by cancer or ulcer, than in operations performed on patients who have received preoperative treatment for such obstructions. The stomachs of such patients are usually filled with foul contents which teem with bacteria, and edema is present in the wall of the stomach. Through constant vomiting and inability to obtain the fluids necessary, the tissues become dehydrated. When the stomach is lavaged twice a day for a few days, and the patient is fed on liquid nourishment, while efforts are made to combat the dehydration by administering fluids by rectum or subcutaneously, an operation for the relief of the obstruction can be very much more safely performed. It is better, in such cases, to perform a simple operation like gastro-enterostomy for relief of the obstruction under local anesthesia. If malignancy is present, it is best to divide the operation in two stages, if possible, performing first a gastro-enterostomy and later a resection.

Performing operations on patients suffering with chronic jaundice is probably one of the highest risks assumed in surgery. Walters has shown that when such patients are prepared for a few days before operation by the intravenous admin-

istration of calcium chlorid, the mortality rate is considerably reduced. When operation is performed on patients of this group who have petechial hemorrhage underneath the skin or mucous membrane, or who bleed from the gums, death almost always follows, and it is very unwise to attempt an operation when such conditions exist. If patients have cancer of the pancreas or pancreatitis with distended gall-bladders associated with chronic jaundice, a temporary cholecystostomy only, for the relief of jaundice, should be performed after the patient has been prepared for operation. Properly given, small blood transfusions may be of help after the operation, if slow bleeding occurs and continues.

Radical surgery on the large intestine has always carried a high mortality. In non-malignant cases such mortality should be much lower, and may be reduced by giving patients careful preoperative and postoperative treatment. When such operations are contemplated, it is best to prepare patients by giving first a simple purgative and then allowing only fluids, sugars and fruit juices by mouth, for several days. During the last twenty-four hours before the operation, an opiate like paregoric is given in order to diminish as much as possible the intestinal secretions and to solidify any feces which may remain in the alimentary canal. After such preparation the bowel at operation usually is found empty, or to contain only a small amount of solid residue, and the operation may be performed with but little soiling. If a serious operation such as colectomy is to be performed, it may be carried out more safely in stages, first an ileosigmoidostomy and later colectomy.

The highest mortality following operations on the colon is in cases of cancer, and is probably due to several factors: (1) the presence of severe infection in the tissues surrounding the growth, (2) partial or complete obstruction, and (3) the lowered resistance of patients from the absorption of toxins generated by the infection and obstruction present, and from the cachexia which develops from the malignancy. Peritonitis, which follows operation in such cases, probably usually results from a combination of these factors. When an operation on such a patient is contemplated, a preliminary preparation for a few days if there is no serious obstruction, is, as I have mentioned, of great value. An effort should be made to carry out the operation in stages, and to avoid,

when possible, primary resections, particularly if obstruction is present. It is far safer to perform first a colostomy or some short circuiting type of anastomosis which will relieve the obstruction, and later to remove the growth; finally, the colostomy or enterostomy may be closed, if it is possible to do so. If there is complete obstruction it should be relieved by some simple operation like an enterostomy or an appendicostomy. If tumors are present in portions of the bowels which are mobile, it is often possible to perform the Mikulicz type of resection in stages. In this operation the loop of bowel containing the growth is lifted out through the incision in the abdominal wall, and the incision closed around it. After ten or twelve days, the loop, which has been brought out, and which contains the tumor, may be cut off and later the resulting colostomy closed. An operation of this type is especially safe if growths are in the sigmoid loop, and may also be used if growths are in the transverse colon. Walters has shown that there is considerable reduction in mortality when it is used, as compared with primary resections. In resecting cancers of the bowel it should be remembered that the inflamed tissues are loaded with virulent organisms; they should be handled as gently as possible and every effort should be made to prevent lowering the resistance of the surrounding tissues by trauma.

The postoperative treatment following operations on the colon is important. The wall of the colon is thin, and leakage may easily occur when gas distention develops in the presence of infected sutures. In order to diminish the possibility of gas distention, it is safer in primary resections to make an enterostomy, with a catheter, in the bowel proximal to the growth. After the operation the accumulation of gas and the prevention of peristalsis may also be greatly diminished by the withdrawal of all fluids by mouth or by rectum for a period of four or five days. During this period about 2000 to 2500 c. c. of sodium chlorid solution may be administered subcutaneously daily. It is often possible for patients to remain under such treatment for a number of days with little evidence of gas formation. After eight or ten days, a simple laxative, like mineral oil or milk of magnesia, will usually suffice to obtain the satisfactory passage of gas and feces.

The rectum may be resected for cancer much more safely following preliminary colostomy, and the one stage operation for resection of the rectum has been largely

abandoned. An abdominal exploration should be performed at the time the colostomy is made, and in certain cases in which growths may still be removed, intra-abdominal metastasis is found which make radical posterior resection later, inadvisable. After the colostomy has been made and opened, the loop of bowel between the colostomy and the rectum is irrigated, and in this way the infected material in the bowel is largely removed. After two or two and one-half weeks, a posterior resection may be accomplished without soiling. The colostomy serves to prevent soiling at the time of the operation and also the escape of feces through the wound after the operation; in this way the mortality is reduced by diminishing the chance for sepsis.

Obesity is a factor which has considerable bearing on surgical mortality. A higher mortality follows serious operations on markedly obese patients than follows similar operations on patients of normal weight. The mortality in such cases may be reduced by the careful reduction of about one-tenth of the body weight. This may be accomplished gradually by dietary measures and by the administration of small doses of thyroid extract. In certain of such patients, several weeks or even months of treatment are required in order to obtain the desired weight reduction. If a patient weighs more than 175 pounds, and a serious operation is contemplated, it is advisable to reduce the weight.

The mortality following prostatectomy has been greatly reduced through the proper preparation of such patients before operation. As a rule, patients without retention need little preparation, but when there is retention of more than an ounce or two it is best to relieve it by the use of a catheter several times a day, or by the introduction of a permanent catheter. When a catheter cannot be borne a preliminary suprapubic cystostomy drainage offers the patient the best chance. After the patient's general condition and renal function improves, prostatectomy may be performed.

In acute abdominal conditions like obstruction and acute appendicitis, the mortality is considerably lowered by an early operation. If acute obstruction is suspected, it is often better to operate early even though the diagnosis cannot be absolutely established, and even though the findings at operation may prove negative, than it is to allow the condition to proceed until there can be no doubt that obstruction is present, when operation may be of no

avail. In such cases radical operations should always be avoided, and an attempt made to relieve the obstruction only by some type of enterostomy or colostomy. Later, if a radical operation is indicated, it may be performed.

The mortality following operations for acute appendicitis is still quite high. During the first twenty-four hours of the attack they may be performed with a risk little higher than that following operations for chronic appendicitis. After the attack has progressed for forty-eight hours, patients enter a period during which operation is much more dangerous, and from then until the fifth day it is recognized that certain patients stand a better chance for recovery if not operated on. Many patients seen during the period from the forty-eighth hour to the fifth day, who have localized pain without evidences of a spreading type of peritonitis, may be operated on safely, but operations during this period in the presence of evidences of a spreading peritonitis through an extension of the tenderness to points considerably beyond the appendiceal region, gaseous distention, rapid pulse, and so forth, are performed with great risk. Many patients of this type will also succumb if treated medically, but the experience of the most capable surgeons of this country shows that the mortality is lower if such patients are treated first by the Ochsner method, until they gain control of the infection present, and then are operated on. About the sixth or seventh day an immunity appears to be established, and if at this time the pulse drops, the operation may be more safely performed.

The majority of patients who develop acute gall-bladder attacks recover from the attacks if treated medically, and after six or seven days an operation may be quite safely performed. A few such patients, however, who have impacted stones with a distended or gangrenous gall-bladder, and who are not relieved of pain by ordinary measures, must be operated on. Experience has shown that drainage of the gall-bladder, in acute cases, is safer than cholecystectomy.

The mortality has been considerably diminished in acute pelvic infections by treating such patients by rest in bed, and with hot douches and ice bags, until the temperature has remained close to normal for a short period. By this time an immunity is established.

Radium has been the means of reducing the mortality in the treatment of certain conditions. Patients near the menopause, with excessive uterine bleeding, and in whom malignancy of the fundus has been ruled out as nearly as possible by a preliminary curettage, are nearly always cured by the administration of a good-sized dose of intra-uterine radiation. This eliminates the risk associated with hysterectomy. Patients with fibromas which increase the size of the uterus to two or three times normal, who have reached the age of forty or more, may be more safely treated with radium than by operation. Young women with small fibromas should have myomectomies in order to preserve menstruation and to allow a chance for pregnancy. Radium also has reduced the mortality in the treatment of fibromas associated with bleeding in patients suffering from other organic diseases, such as heart diseases, nephritis, and anemia, etc. Operation is still advisable in certain early cases of cancer of the cervix when the growth is limited to the cervix, but it has been shown that the results obtained by radium properly administered are about the same as those obtained by surgery. All patients with extensive involvement of the cervix and of the vaginal wall are best treated with radium, thus avoiding the risk of hysterectomy. Because of the excellent results obtained by operating in cases of cancer of the body of the uterus, it probably is best to perform a hysterectomy, as the increased chance for cure overbalances the risk of operation.

The mortality has been greatly reduced and the end results much improved by treating cancer of the tongue with radium. The implantation of radium points around the growth is regarded as the best method of treatment. In many cases the growth may be completely destroyed, while in others growths of the tongue which formerly would have been inoperable, are controlled to such an extent that a local excision with cautery may be done later. The mortality from such excisions is practically nil. Radium, however, does not prevent extension of the malignancy to the cervical glands, and these should be excised surgically.

Anesthesia as a factor in surgical mortality deserves considerable attention, and Crile's efforts to develop some method of producing anesthesia which will be followed with the least chance of postopera-

tive complication, are very noteworthy. At present it appears as though a combination of a light general anesthesia, such as nitrous oxide, or ethylene, combined with local anesthesia and enough ether to produce relaxation, is most suitable for patients who require general anesthesia. Many operations are easily, and probably more safely, performed under local anesthesia, but whether or not such anesthesia may be used, depends on the general make-up of the surgeon and of the patient. Although it is too early to make definite assertions, it appears as though ethylene gas, recently introduced as an anesthetic, will prove a valuable addition to present anesthetics. This gas may be regarded as occupying an intermediate position between nitrous oxid and ether, and by its use nearly all extra-abdominal operations may be performed with ease. In intra-abdominal operations the relaxation is usually insufficient, and, in most cases, it is necessary to use a small amount of ether besides the ethylene gas, and also to inject the peritoneum with novocain. Ethylene gas produces rapid anesthesia, and its administration gives the patient as little discomfort as any anesthetic known. While under its effects, patients breathe almost normally and perspire very little, if at all. The rapidity with which they awaken and gain control of the reflexes diminishes greatly the possibility of inspiration pneumonia.

One could enumerate many other ways of reducing mortality, but it is not my desire to go into too many details. The point which I wish especially to emphasize is the fact that the surgeons of the present generation should appreciate the importance of good judgment in the selection of patients for operation, the proper preparation of such patients, and the selection of an operation which may be performed without a fatal termination. It is often necessary, in desperate cases, to operate in the face of great risk, and if death occurs, it is easy to quiet one's conscience, but it is a great calamity to have death occur if operation has been advised in a patient who is suffering some inconvenience from a disease, but who might live indefinitely if left alone. We are living in an age when surgery has reached its highest efficiency, and the surgeons of this generation must not lag behind, but must help in some way to advance the art which they have chosen as their life work, and in this way place surgery on a still firmer basis.



## THE GOLDEN RULE IN MEDICINE\*

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"Therefore all things whatsoever ye would that men should do to you do you even so to them."

It is recorded in the book of Genesis that God in His great wisdom created man, in His own image, a little lower than the Angels, crowned him with honor and glory, breathed into his nostrils the breath of life and man became a living soul. This divine declaration to my mind settles the question of Darwin's theory.

From the time man was created, he has endeavored to adjust and readjust himself to the conditions that oncoming civilization demanded, and in endeavoring to fully establish his adjustments he has formulated from time to time codes of ethics which were applicable to the needs of the day in which he lived—"Ethics may be defined as the science of human duty." A code of ethics is a carefully formulated system of principles or rules of practice for the guidance of a particular group of individuals, such as the members of a medical profession. The Mosaic law is a code of ethics in the broadest sense as applied to humanity at large. The development of codes of ethics is the indication of the evolution and growth of moral consciousness. Ethics and morality are not always synonymous; neither is ethics and legality.

"Right" and "Wrong" are terms which have different meanings and interpretations at different periods of the world's history.

The necessity for specific principles for the guidance of individuals having common interests in addition to the tenets of religion and morality has been recognized from the earliest historical periods." Probably the most ancient code of professional ethics is the Hippocratic oath which has been in existence for about 2500 years, and which is an eminently suitable starting point for a discussion of the subject. The Hippocratic oath is a splendid example of exalted idealism couched in virile dignified language, and with minor changes applicable to present day conditions. The earliest evidence of code-writing in the United States seems to be the code adopted by the Philadelphia College of Pharmacy in 1848. Then in 1852, the Code of the American Pharmacists and Druggists throughout the United States. These

have been followed by quite a number of codes for pharmacists and druggists.

In 1891 the United Typothetae of America adopted its code under which it is acting today. The Typothetae code was followed by that of the National Confectioner's Association, adopted in 1901. The code of the American Medical Association was adopted in 1903, (revised in 1912), and in 1904. The National Food Broker's Association developed and subscribed to a code. The code of the American Bar Association was adopted in 1908.

So we see that although most of us have been more or less under the impression that written codes of ethics were peculiar to professions until the last four or five years, Associations of all tradesmen and merchants were actively engaged in setting down written standards of business conduct before some of our most prominent professions had adopted formally written expressions of standards of professional conduct. The Golden Rule is applicable to every phase of human activity, endeavor and to the conduct and relations of all men through all ages to come. We are here in all the vigor of our manhood ready and willing to do our part individually and as a profession as a whole in the world's great work, anxious to have a share in the great civic, moral industrial and professional uplift of our day and time, and further desirous of establishing, maintaining and perpetuating the highest professional standards and ideals.

In 1924 we find ourselves in the midst of no small proportions—This movement is not entirely the result of professional activities but is the tangible evidence of the gradual chemicalization of the minds of the world, however, subscribed to from the earliest historical periods by the medical profession of state and nation.

The medical profession has been giving serious thought to this particular aspect of life; that of making professional standards rest on a common plane with social standards.

The wisdom and scholarship of Rabbi Hillel, an elderly contemporary, and according to some, the teacher of the lowly Nazerine, was challenged by a scoffing libertine asking that he express all the teachings of God in a space of time no longer than one could endure bearing up his weight on one leg. "Certainly" said the Rabbi, "here it is, all of it, love thy neighbor as thyself, all the rest is mere commentary."

The form of our professional organiza-

\*President's address before the Mississippi State Medical Association, Jackson, Miss., May 13-14, 1924.

tion is the most democratic, based as it is, upon representation of all kinds of human endeavor and eliminating all politics and creeds. Sitting together as we do and breaking bread together regardless of all conventional social distinctions, we are endeavoring to give our country a demonstration of equality, friendship, unity and good will sorely needed in this weary old world at this time.

In the 60's our country demonstrated it's geographical unity to the disappointment of many jealous nations and in the recent great world war it gave concrete and abundant evidence of the unity of it's people to the amazement of the whole world—In spite of this, the bigot and the chauvinist are abroad spreading the gospel of discontent, hate, and strife. Neighbor is set against neighbor, employee against employer, members of one creed against those of another and strenuous attempts are being made to break up our united nation into strata and castes, based upon chronology, theology, racial prejudice as well as upon geographic origin, and saturating them with repellent antipathies. It is becoming no longer a question what an individual is, but whether his citizenship is one of accident or of choice and whether his remote ancestors worshipped Odin, Jupiter or the Golden Calf. History is being distorted and science prostituted to furnish a basis for these false and baneful distinctions, notwithstanding the fact that our penitentiaries on the one hand and the galaxies of heroes in war and peace on the other know of no such differences—May the great God of Heaven in whom we live, move and have our being thwart the logical effect of this baneful propaganda and bring it to naught, in the interests of his people, and that we may not be made to go through the horrible experiences of the 60's before unity is restored.

In this crisis the medical profession is setting an excellent example, one thoroughly consistent with the principles laid down by the founders of our beloved country "America." For what is America? Let a descendant of the psalmist tell it in his own way.

"God built a continent of glory and filled it with treasures untold—He carpeted it with soft rolling prairies and pillowed it with thundering mountains, He studded it with soft flowing fountains and traced it with long winding streams. He graced it with deep shadowed forests and filled them with song. Then He called a

thousand people and summoned the bravest among them—they came from the ends of the earth bearing a gift and hope—the glow of adventure was in their eyes and in their souls the glory of hope. And out of the bounty of earth and the labors of men—out of the longing of hearts and the prayers of souls—out of the memories of ages and the hopes of the world, God fashioned a nation in love, blessed it with a purpose divine and called it America. This America is what Woodrow Wilson stood for. He endeavored to lay down certain principles to insure everlasting peace not only to our nation, but to all nations of the earth. When this great statesman was dying, when his grasp had grown childish weak and his eyes had put on a dying stare he remarked to Dr. Grayson (his physician) "you have done the best you could for me, I am a broken machine, I am ready," then he sighed, breathed his last and went into the great beyond from whence no stranger has ever returned.

Picture, if you can, our professional structure trying to function, today, without standards of ethical conduct. How far would we go using the old haphazard measure of—"hand and thumb"—a true meeting of minds would be extremely difficult of realization. A smooth running, efficient and harmonious economic system would be almost an unknown quantity.

The profession today, within nations and between nations is trying to function with established common standards of professional morality and service. The determination adoption and observance of standards, of weights and measures has done more towards advancing civilization by placing business on a more sound and economic basis than will the fixing, adopting and observance of standards of professional and business morality and service. Not until such standards have been developed and put into practice will there be such a thing as equality of opportunity in the business and professional world. We will have equality of opportunity when competition is based on quality, and professional and business service is 100 per cent honest. The medical profession is constantly urging higher standards of professional conduct.

The individual member of the medical profession is urged to take an active part in the Mississippi State Medical Association and as a member of the medical profession to subscribe to a code of standard and correct practice.

Through the Mississippi State Medical

Association a physician is placed in a favorable position to foster this great movement. Some may ask, "why do we need written rules of conduct when we have the Golden Rule on which to base our professional conduct?" They will follow this question with the true assertion that rarely does one come in contact with the professional man who is striving to do other than the right thing in conducting his affairs. But in our complex society even the sincere desire to be governed by the Golden Rule does not go very far toward supplying answers which are accurate and true when questions of ethical procedure are encountered. It is necessary and paramount to have specific rules of conduct plainly stated and direct in their application to define professional and business relations, rules which state what a man shall do and what he shall not do. We also have the Ten Commandments and all recognize the additional value of their definiteness with reference to social and professional relationship. The same thought applies in every-day professional life, the relations between patient and doctor, physician and druggist, the professional man and the laity.

Each added relationship multiplies the difficulties of correct professional conduct. Hard and deep thinking is often necessary to decide whether a certain contemplated action is right or wrong. This should remind a professional man that there is a greater and higher power to whom we must subscribe and that in our weakness we are prone to exclaim as the poet—

"Guide me O thou great Jehova,  
Pilgrim through this barren land,  
I am weak but thou art mighty,  
Hold me with thy powerful hand."

Professional customs, many of which have been practiced so long, that few inquire as to their ethical correctness, introduce further complications. So it is that modern methods of conducting professional activities are responsible for the need of an ethical code of professional relationships and an adequate code of standards of correct practice for the profession at large. A clearly defined and written code of ethics, honestly subscribed to and practiced, helps men to think clearly and correctly, and so to act honorably. It helps not only those whose profession has been conducted with probity, integrity and honesty of purpose, but strengthens their will and ambitions to continue in the right. It

provides also an incentive for those whose moral conscience is insufficiently quickened.

Perhaps equally important is the fact that a code serves as a gauge by which the public may determine the basis on which a medical profession is building and operating. It is reasonable and fair to say that prescribed codes of practice will do much to foster confidence, good will and favorable consideration of the public. At present the underlying difficulty in professional codes is a lack of scope and standardization.

The general code should be broad in its scope and specific in its application, treating each factor of a profession according to its relative importance. One finds little guidance in glittering generalities.

The spirit of the times as well as good professional conduct and sound economics demand a more exacting and a more sensitive professional and business conscience.

The various recognized, ethical well established medical societies are fostering the movement of annual physical examinations of individuals. These examinations to be made by men who are competent to conduct a careful, painstaking and scientific examination, and those who will not overlook a dangerous heart, when no murmurs are present or audible. The most dangerous heart is the murmurless heart, and the highest mortality today in the United States is due to diseases of this organ.

There is only one exception to the rule that a little learning is a dangerous thing, this is to be found in the early recognition of the first manifestations of cancer, a little knowledge in the beginning will save suffering and a miserable death if applied, and action and advice are sought early. This brings us to an expression of the Pope who said—

"A little learning is a dangerous thing;  
Drink deep, or taste not the Pierian  
Spring—  
There shallow draughts intoxicate the  
brain,  
While drinking largely, sobers us again."

The application of the Golden Rule by the profession to the public at large finds its expression in our endeavor to protect the sick, helpless, ignorant, the educated, refined and suffering humanity in general, the world over, against frauds, quackeries, practices, and the million other dishonest, unloyal, ignorant, unfitted individuals

who would rob you of the last penny for their wordly gain.

Listen—Did you ever know of an Abrams adherent, a chiropractor or any other fraud or quack to raise one hand, to utter one word, or to take one step in conserving your health, well-being and happiness? I say NO, and challenge any fair-minded, God-fearing man or woman to bring forth any evidence of an affirmative character.

It is due to the knowledge and thorough understanding of the medical profession that Bubonic plague which, once under the name of black death, decimated the populations of the earth, is now under the control of the long, strong iron arm and hand of public health administration. Small pox, typhoid, malaria, yellow fever, and many other formidable diseases are under our control and the public enjoy immunity to them and rest in sweet repose under the influences and activities of a well-organized medical profession and public health service.

The prevention of tetanus, the prevention as well as the cure of diphtheria in its early stages, should command the respect and confidence of the laity. The recent discovery of Insulin and with it an application of rigid scientific dietetic measures, is a blessing to humanity and a God's-send to the unfortunate diabetic.

The complexities of our modern civilization demand that a physician in order to meet the scientific demands of his patient of today, must narrow his field, systematize his time and broaden his vision and knowledge.

The thorough systematic education, the skill and availability of the services of the regular physician must instinctively create in the minds of the people an appreciation of his superior claims to their confidence, and thus the medical profession becomes a law for its own protection, and which must prove stronger and more enduring than acts of assemblies or rulings of courts. Its efficiency and influence with the public rest solely on the amount of its useful, scientific and practical professional knowledge. Let us at all times and seasons insist on increasing these by every possible means. Ignorance and Charlatanism should be made odious by contrast.

In the hard and desperate struggle, we welcome and embrace the Woman's Auxiliary in stimulating the physician in doing his best, for they have outlined their functions which embrace: The great interest and pleasure of helping to carry on the aim of this body of professional men they have

placed on the highest pedestal. Increased understanding and sympathy of the husband's work, together with helping to promote local unity and harmony among doctor's families, is part of the great aim of their organization. As they look to the advancement of health and education, which is the aim of the medical profession, should we by doing so become extinct, they are looking directly to the place of places "our homes." They say come let us play a part in furthering these splendid principles.

#### *The Economic Side of Medicine.*

The economics of every profession is often seriously considered and discussed. Did you know my good people that statistical data prove that the time-payment plan is the most insidious and destructive to the economic side of medicine and business as it affects the physician and laity.

Automobiles head the list—far out in front. It is said that 85 per cent of all cars in the hands of private owners have been sold on the time-payment plan. It is also stated that no less than 6,000,000 persons with incomes of less than forty dollars per week own automobiles—you will know how much the upkeep is. It has been said that the individual who owns an automobile should have a blacksmith shop in one end of the garage and a bank account in the other. Pianos, radio outfits, phonographs, typewriters and furniture, push the automobile for ascendancy in the deferred payment market.

In 1923, it is stated, 300,000 pianos were sold for a sum approximating \$120,000,000 and from 75 to 90 per cent of these were sold on the time-payment plan. Fully 90 per cent of the phonographs sold are paid for in installments. More than \$50,000,000 worth of radio sets and furnishings were bought last year in the same way, and 65 per cent of all washing machines and vacuum cleaners disposed of were bought "on time." The foregoing is what the ignorant negro calls the "excitement plan." The slogan should be "Pay as you go and if you can't pay don't go."

#### *Standardization of Hospitals.*

The all-important question has been asked, what is the matter with our hospitals? I believe personally that hospitals should not be under political control, but the politicians should furnish or appropriate the necessary funds for the establishment and maintenance of same. Every hospital in the state should be standard-

ized. This means that a complete written record should be preserved of the patient admitted to any hospital, a clear and well-defined history, followed by a complete record of physical examination, and treatment employed if surgical, medical, or otherwise.

### *The Physician and the Druggist.*

The time is not far distant when a regularly licensed physician will not patronize a drug store in which patent medicines are for sale, but will demand that only chemically pure drugs be available with known contents to be used in the filling of prescriptions. We will no longer witness the triad show in front of drug stores, which consists of a white man and two negroes to furnish music in order to attract crowds of ignorant people, as well as inducing them to buy of their medicines of unknown ingredients and promises of miraculous cures.

The physician is often called upon to escort a patient through the valleys and o'er hills of acute and chronic illness, and too often we are led to the approach where the patient leaves the physician standing with uplifted hands, only to see him walk down into and through the valley of the shadow of death, only being guided by the flickering light of ignorance and superstition.

The concrete, definite, specific and honest application of the Golden Rule in medicine is that a patient has a right to know the diagnosis in his case if it is possible for such to be made. Next the treatment advised or administered should, in my opinion, be made known to the patient. The prognostic outlook should be forecasted and the patient should be in full possession of all the fundamental facts, as well as being made acquainted with every detail of his case.

In the case of a surgical operation a detailed description of findings and what was done should be thoroughly understood by the patient.

The foregoing fundamental facts in the application of the Golden Rule in medicine will insure good-will to the physician and layman alike, as well as insuring everlasting peace and good-will to the nations of the earth.

"Therefore all things whatsoever ye would that men  
Should do to you do you even so to them."

## STATUS OF MORBIDITY REPORTING IN LOUISIANA.\*

OSCAR DOWLING, M.D.

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NEW ORLEANS.

By morbidity reporting is meant the registration with the central State office of certain specified diseases. These reportable diseases are familiar to all of us and need no mentioning here. They are considered reportable for the principal reason that they are believed to be communicable. The reason for reporting such diseases is obvious.

It is generally agreed that the primary function of any health organization is the control of epidemic diseases. If this can be accomplished it means that not only has sickness been reduced, but that lives have been saved. Plainly, morbidity and mortality cannot be combated if there is no knowledge of such force upon which to base action.

The value of morbidity returns may be summarized as follows: 1. They make possible the early identification of epidemics with a consequent effort to control. 2. They enable the health department to do the most effective work because some of the reportable diseases are controllable. 3. They make possible an accurate study of the forces of morbidity within the state. 4. They permit case fatality rates to be computed and studied. 5. They allow studies to be made of the relative susceptibility of different classes of humanity.

The importance of the knowledge of the occurrence of certain communicable diseases to the central office is conspicuous. Such knowledge upon its receipt can be disseminated to those sources that may be effective in the checking of an epidemic.

Complete morbidity returns many times provide the quickest and surest means of locating the focus of an incipient epidemic. For example, if a milk-borne diphtheria outbreak should be noted, from the morbidity records it would be possible to see from a spot map that the cases were confined to a definite milk route, thereby pointing specifically to either a diphtheria carrier or to an unrecognized case somewhere in the employment of the dairy in question. Upon such evidence control methods could be promptly and effectively employed. It is plain that without such morbidity records the determination of the

\*Read before Louisiana State Medical Society, Opelousas, April 22-24, 1924.

focus of infection would be difficult and perhaps lead to no mean epidemic before the source might be found.

Many instances of the value of having prompt and accurate morbidity data for the effective control of epidemics might be mentioned. It is conceivable that a state-wide infection might be avoided if epidemiological data were adequate; while on the other hand it is most inconceivable to think of doing very effective work in the control of epidemics without the proper morbidity records.

One of the outstanding values of complete morbidity knowledge is the aid it offers any health organization in defining its most effective program. In what localities should public health endeavor be concentrated? Where in the state are there occurring the greatest number of controllable diseases? How, in the absence of complete morbidity records, can such questions be decided?

Our State Health Department is operating upon a definite budget. It is our specific obligation to get the most returns from our efforts with the least expenditure of state funds. This is impossible unless we have the necessary information to guide us. The source of this information is the morbidity returns.

In the present stage of public health work it is necessary for any health organization to concentrate upon those diseases that occupy the most important places in the morbidity reports. It is, of course, necessary that we continue in our efforts to completely stamp out those diseases that we have thus far succeeded in materially influencing. But if such a procedure is followed it should be only in those localities in which all morbidity is relatively low. In other words, the objective of any health program should be to control those controllable diseases that are contributing the greatest to the morbidity record.

This is reasonable and logical from two standpoints. First, we would be (if our efforts were at all successful) accomplishing the very greatest amount of good in the way of preventing sickness and possible deaths. Second, we would be getting the greatest returns from our financial investment. To illustrate this point let us take the two diseases of diphtheria and typhoid fever. The former disease yet occupies a very prominent place in both the morbidity and mortality reports in spite of the fact that we have been and are using antitoxin. And here it should be said that the use of antitoxin contributes

very little, if anything, toward the final and a permanent control and eradication of diphtheria. The use of toxin-antitoxin will probably do more toward realizing this result than all the antitoxin that might be given. Typhoid fever, like diphtheria, is a theoretically controllable disease and typifies what public health can do in the control of diseases, the epidemiology of which is thoroughly known. Now in a given community if diphtheria were found to be a greater contributor to the total morbidity rate than typhoid the natural course to follow would be an intensive endeavor to control diphtheria and completely disregard typhoid fever (provided the community was equipped with a safe water supply and proper waste disposal). This would be permissible on the basis that whatever time and money were spent on typhoid would render but relatively little progress. In other words there seems to be an invariable residuum of morbidity, the complete eradication of which, would require an inordinate expenditure of money and dissipation of time and energy. We can decrease morbidity rates to a certain minimum beyond which further reduction becomes practically impossible. Typhoid fever in many localities has reached this almost irreducible minimum. The cases that comprise this resultant minimum are traceable in most instances to carriers. The problem of successful isolation and control of typhoid carriers may be said to be as yet unsolved. It would be, therefore, folly to continue to direct expensive public health measures toward the control of typhoid in such localities. Smallpox represents another disease that is in the same category as typhoid in many places. It is interesting to note in passing that there has been reported in the State of Louisiana 5,345 cases of smallpox in the last seven years.

It follows, therefore, that if we had reliable morbidity data we could effectively outline our crusades against disease in Louisiana, and get the greatest return from our investment.

About the great number of diseases prevalent today we have practically no knowledge concerning their specific forces. That is to say, we have practically no idea of the probability of a given disease attacking a particular class of individuals. For example, what is the probability of a white female, aged 20, living in the city, and employed as a stenographer, of contracting tuberculosis. Or what is the prob-

ability of a white female child, aged 5, living in the country, contracting diphtheria, measles or whooping cough? If we had such information it would be very helpful to us in the proper scientific handling of suspected cases, contacts and in general the most effective application of quarantine measures. Moreover, we would be in a better position to apply the various principles of preventive medicine because we would know those classes of individuals in which the probability of acquiring infection by the different diseases was the greatest. Besides this knowledge, such specific rates would furnish excellent means of comparison of morbidity forces in one locality with another, and of measuring accurately the progress that might be made by public health.

The value of morbidity records in allowing the computation of case fatality rates is an important one. If we assume that our morbidity records are adequate (and we have no reason to believe in many states they are not) we can determine, from the number of cases and the number of deaths reported in a given time period, case fatality rates. Such rates would tell us what the probability of dying with a given disease is. The prognoses that are made every day by the medical profession are based upon just such rates. Unfortunately, the data from which these rates have been taken are in general from hospital records. I think it will be agreed by all of you that hospital cases are on a whole an adversely selected group. This being true, the resultant case fatality rates may be taken as not being true bases for prognostication. If we had, therefore, accurate and complete data upon morbidity we could arrive at far more dependable case fatality rates than we now have.

The final value of morbidity records is the field they offer for original investigations or research. At the present time this field is practically untouched for the sole reason that the data necessary are not available. Many broad biological problems of a distinctive importance to man are capable of solution when the necessary information is collected. For example, that yet curious and unexplained phenomenon of susceptibility could be attacked. By refined methods of statistical research there is no question but that if we had adequate data we could do much toward getting at an explanation of the inheritance of natural susceptibility or resistance of different classes of individuals. The scope of such research is almost unlimited.

It is necessary now to point out the shortcomings of inadequate morbidity data. What has been said it is hoped will make clear the indefinite number of valuable contributions that might be added to our present knowledge. Furthermore I think it is clear to you now how many fallacious conclusions and impressions might be drawn from incomplete data. Such data tend always to lead us astray unless we are aware of their dangers. *About the only value that incomplete morbidity records have it to instil within us a hope that some day they will be complete. Otherwise they are dangerous.*

Let us now turn to a brief consideration of the status of the morbidity reporting in the state of Louisiana, for we are now in position to appreciate their lamentable condition.

The morbidity data that we have collected and tabulated cover a period of seven years—1916—1922. In order to trace the worst offenders we have tabulated the reports of cases and deaths for these years by parishes. The task of including all diseases would have been too great. The seven diseases, diphtheria, gonorrhoea, malaria, smallpox, syphilis, tuberculosis and typhoid fever have been chosen for study. It is felt that these diseases may be taken as representing the true status of reporting in this state.

Examination of the data by individual years for the separate parishes reveals the gross incompleteness of reporting. Unfortunately the number of returns in most of the parishes is too small to allow much to be said. In other words, where we find say, two cases or even three or five of a given disease and the same number of deaths, although such hundred per cent fatality is unlikely, it is not improbable. While if there were thirty-five cases say, with thirty-five deaths in a given area, although still possible the probability of such occurrence is very, very small. There are, however, repeated instances of the registration within a given year of more deaths than cases of the different diseases studied. This is particularly true of tuberculosis. In the case of this disease we are dealing with a chronic infection (only pulmonary tuberculosis is included) which could account for some of the discrepancies between the case and death figures. But the differences for the state in the years studied range as great as six times as many deaths as there are cases. In only one instance, the year 1921, were there more cases than deaths, which

year showed a case fatality rate of 66 per cent.

The figures on tuberculosis for the state as a whole are: 1916, 1,369 deaths and 324 cases; in 1917, 1,500 deaths, 334 cases; 1918, 1,964 deaths, 322 cases; 1919, 1,514 deaths and 286 cases; 1920, 1,616 deaths and 555 cases; 1921, 1,414 deaths and 2,144 cases; in 1922 there were 1,388 deaths and 1,011 cases. The figures for the seven years combined are 4,976 cases and 10,765 deaths. These figures are exclusive of New Orleans (Orleans Parish.) I think the story revealed by these figures is sufficiently cogent. They need no further comment.

Diphtheria presents a more encouraging picture of morbidity reporting. The case fatality rates for the years 1916 to 1922 inclusive, respectively are: 15.5, 20.0, 32.9, 41.4, 32.7, 27.1 and 27.9. Surely the case fatality rates in this state are not as high as these figures would indicate. An interesting feature about these figures is their variability. It is a bit unreasonable to think that the case fatality of diphtheria should vary from 15 per cent to 41 per cent within four years' time. It should be reiterated here that these rates mean, that of the number of cases of diphtheria so many die. Such rates are, therefore, different from the so-called death rates which give us the number of individuals dying of a given disease per thousand population. What this means is, that the case fatality rate is not necessarily affected by the fluctuations of the incidence of disease. Variations in case fatality rates, therefore represent variations in the virulence of the infective organism and the resistance of those infected. Consequently, we should not expect such variation to occur in case fatality rates as is noticed in the above diphtheria rates.

The rates on gonorrhoea for the years 1916-22 respectively are 0.8, 1.1, 1.2, 0.1, 0.3, 1.1, 1.4.

The malaria rates for the seven years are: 43.0, 20.8, 27.7, 22.5, 27.1, 21.6, 27.4. These figures are obviously misstatements of true conditions.

The case fatality rates for smallpox for the years studied are: 0.2, 0.7, 2.1, 16.3, 4.8, 1.6, 0.3. Again we are confronted with a conspicuously erroneous picture.

The figures on syphilis are likewise ludicrously interesting. They are: 41.6, 57.8, 90.8, 15.8, 16.3, 14.5, 15.5. Comment upon these figures would be superfluous.

Finally in the case of typhoid fever, a disease we would surely expect adequate

data upon, are found rates that are in keeping with those already listed. The case fatality rates for this disease over the seven years are: 39.2, 38.3, 51.8, 41.2, 41.2, 36.1, 27.9. Any one of us knows that the true case fatality rate of typhoid is about ten; therefore of how much value are the above rates?

The figures by years have been added and rates have been computed on the totals. They are: for diphtheria, 30.0, gonorrhoea 0.6, malaria 26.5, smallpox 4.5, syphilis 20.9, typhoid 40.7. These figures reveal a sad situation. They mean one of two things, and to an unsophisticated, casual observer, either might be taken as the right thing. They indicate that either the morbidity is not adequately reported (which each of us knows to be the true condition), or that the medical profession of this state is relatively unsuccessful in its practice of curative medicine (which we know is untrue).

The State Health Department is doing the best it can with the data that it has to work with. We are impatient because we are ambitious. The success of the health department in its epidemiological work is in a large measure dependent upon the medical profession of the State. I trust this paper will corroborate this statement, and that each of you who has listened to its presentation, will pledge himself to lend us his sincerest co-operation in the future.

#### DISCUSSION

Dr. Homer Dupuy (New Orleans): I shall limit my remarks entirely to the question of diphtheria. What shall we do with the carrier? We know that there is an increase in the incidence of diphtheria by reason of concentration of population. On the other hand, we know that with this potent agent, antitoxin, we have reduced the morbidity of diphtheria, but the incidence is on the increase—because we have not mastered the question of the carrier. We have two kinds—active and passive carriers. The patient who has had diphtheria may remain a carrier indefinitely. We have had cases where we removed tonsils and adenoids and took various other precautionary measures, but they still remain carriers.

But there is a ray of hope. Think of what we have already done with the Shick test. We can take a group of children and with mathematical precision segregate those who will be liable to catch diphtheria from those who are immune. Then comes toxin antitoxin. We hope some day to be able to see what toxin antitoxin will do for the carrier. Toxin antitoxin being a vaccination process, we hope to catch the active carrier, the fellow who has had diphtheria and is running around giving it to the school. There is the ray of hope. We are working along this line and hope some day to have something to offer.



## “NEWER ASPECTS OF CALCIUM METABOLISM”\*

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All of us have, no doubt, been impressed by the recent emphasis that has been placed upon the importance of the calcium ion and the role that it plays in maintaining a normal medium within which the tissues of the body can best function. Until comparatively recently the clinician was satisfied to attribute to calcium salts the functions of making bone and of assisting in blood coagulation, together with the knowledge that calcium was an essential ingredient in a normal diet.

With the gradual accession of knowledge from various sources, interest has become acute, until now we are in danger of imperiling the lime salts with the same fate that has been meted out to the endocrine glands—that of becoming the dumping ground for obscure pathological physiology. It is with the hope of avoiding such a fate that this brief resumé of the facts regarding the solution, absorption and utilization of calcium is set forth.

Let us bear in mind one important fundamental fact with regard to calcium, that is, that almost all of its salts are insoluble in alkaline and some only very slightly soluble in acid medium. As an example of the former we cite calcium oxalate, of the latter tri-calcium phosphate. When calcium is held in combination with an organic substance, it is rendered less soluble by such combination; thus the calcium caseinate of milk when acted on by acid rennin is converted into another compound called calcium paracaseinate, which is less soluble than the corresponding calcium caseinate present in the milk from which it is formed and, therefore, when the milk curdles it is precipitated as a solid.

We must therefore bear in mind that the calcium which we ingest is not always an isolated, inorganic salt, soluble in the enteric juices and readily absorbed, for it is subjected to combination with other salts, to acid and alkaline mediums and to the formation of in-soluble soaps.

There is no tissue in the body that does not contain calcium and of course the bones contain it in largest amount. Here we find it as tri-calcium phosphate, a rela-

tively insoluble salt. It is for the phosphates that calcium has a special affinity and whenever they are brought together in suitable medium, calcium phosphate is precipitated. In the intestinal tract a good deal of the ingested calcium forms insoluble calcium soaps and is excreted as such in the feces. When a high fat ration is partaken of, a larger amount of calcium is lost in that way, hence the constipated, hard soap stool of prolonged high fat feeding.

There seems to be a very efficient mechanism for regulating the amount of calcium that can be absorbed by the blood stream, for it is impossible to raise the blood calcium above the normal level by oral administration of calcium, even in enormous quantities (1). Only temporarily will a sub-normal blood calcium level be raised by calcium ingestion. That there never is a calcium deficiency in a normal diet is certainly true so that if a hypocalcemia exists, it must be due to some cause operating in the gastro-intestinal tract to prevent absorption, or to excessive urinary excretion, or to some condition of the tissues which causes calcium to be removed from the blood stream. That the latter hypothesis is true seems most unlikely, for we find no calcareous deposits in the tissues in conditions associated with low blood calcium, as in tetany, and on the other hand, calcified nodules found in certain pathological states have not yielded low blood calcium levels. Urinary calcium is always very small in amount (0.002—0.010 gm), being sometimes less than 1 per cent of that lost from the body and the smallest amount in the urine is found in active rickets; indeed, not infrequently there is observed in the healing stage an actual rise in the urinary calcium. Hence excessive excretion of calcium by the kidneys is not responsible for removal of calcium from the blood. Again, infantile rickets is not the result of deficient calcium ingestion, for there is an abundance of calcium in cow's milk, though a good deal of it seems to be in an insoluble state, and our investigation of the calcium content of breast milk in relation to rickets has not shown any constant variation from the normal (2).

The normal blood calcium level is between 9-11 mgs per 100 cc. of serum (or plasma) and as I have said, this level cannot be raised except by direct injection of calcium into the circulation. There are, however, some conditions in which this level is lowered, as, for example, in tetany,

\*Read before the Orleans Parish Medical Society, May 26th, 1924.

both idiopathic and experimental, in certain cases of active rickets and in nephritic uremia, the calcium level falls to as low as 2.0 mg per 100 cc. of serum. The form in which calcium exists in the blood is two-fold: as soluble salts which dialyze through animal membranes and as calcium-protein combination, which is non-dialyzable. The dialyzable or available calcium comprises about 65 per cent of the total, the calcium-protein about 35 per cent; and this proportion maintains even in presence of a reduced total.

The blood calcium is one of the most fixed constants in the body; it does not vary with the diet, or with the alkaline reserve of the plasma, or with severe acidosis or alkalosis. It is reduced only by a very slow and gradual change and its return to normal is equally prolonged. That the presence of phosphates is essential to the proper utilization of calcium seems assured, for with low phosphorus diets true rickets can be produced in experimental animals, as has been shown by Sherman and Pappenheimer, McCollum and associates, Hess and his co-workers and other investigators of the rickets problem. Moreover, calcium and phosphorus tend to balance one another. Thus in active rickets where the phosphate is low, the calcium is normal and when tetany occurs, associated with rickets, the calcium falls and the phosphate rises. In nephritis when there is retention of phosphate, the calcium in the blood falls and to this is attributed the convulsions of uremia. I recently had the opportunity of analyzing blood from a patient of Dr. Lenann's, a man who had swallowed iodine and oxalic acid. His kidneys were practically not functioning at all, for he had complete anuria. His blood showed 6.6 mg inorganic phosphate per 100cc plasma, the normal being, for an adult, 2.5 mg and the calcium was 7.0 mg—an increase of over 100 per cent in the phosphate, a decrease of 30 per cent in the calcium.

In a recent publication of Orr, Holt et al. (3) a series of metabolism studies were carried out in infants which showed conclusively that the ultimate cause of the defective calcification of bones and the low phosphate concentration in the blood in rickets is the defective absorption of calcium and phosphorus from the intestine. By determining the amount of calcium intake and output in urine and feces they showed in all active cases either a very low retention of calcium or a negative balance (output greater than intake).

The retention was greatly increased as the result of cod-liver oil administration or ultra-violet ray therapy.

What factors operated to bring about this increased absorption? That is a question as yet unanswered, but of greatest significance in this regard is the work of Babbot et al. (4) of Yale University and of Marriott and Davidson (5) of Washington University, who studied the gastric acidity of normal and diseased infants. Both schools found a reduced hydrogen-ion concentration in the gastric juice of infants during disease. Babbot found it markedly lowered in infants with tetany (with low blood calcium), Marriott obtained reduced acidity in infants with febrile diseases. This brings us back to our fundamental proposition that calcium remains in solution only in an acid medium and is probably absorbed only from such a medium. In 1907 Von Noorden wrote: "The insoluble calcium salts are dissolved in the stomach to a greater or lesser extent, depending on the amount of hydrochloric acid present. They are only there absorbed, however, in the merest traces, the greatest absorption occurring in the upper parts of the small intestine. There the dissolved calcium solutions are transformed again into neutral or acid calcium carbonates and phosphates and into the salts of fatty acids, the amount taken up by the body depending on the reaction of the intestine and on the quantity of carbonic acid and phosphoric acid, and upon the various fermentation acids present." (6) More recently Steenbock and his associates (7) found that many calcium salts, remaining soluble only in an acid medium, can be absorbed from the gastro-intestinal tract and add "it is undoubtedly the acidity which makes possible the assimilation of the difficultly soluble calcium salts from the intestine." Further important knowledge is obtained from the fact that tetany can be cured by the administration of hydrochloric acid or of substances producing acid, as has been demonstrated by Wilson, Stearns and Janney (8) and by Gamble and Ross (9).

It seems reasonably certain, therefore, that any attempt to combat hypocalcemia should take into consideration the fundamental necessity for a proper acid medium for the solution and absorption of calcium salts. Very recently several writers (10, 11) have attributed hay fever, asthma and other spasmodic affections of the respiratory tract to deficient blood calcium and have treated these conditions by calcium

injection or oral administration. I have made calcium determinations on the blood of four adults with severe bronchial asthma, one an older physician in this community, and obtained these figures: 10.3, 9.6, 9.4, 9.2 mg per 100cc plasma, all within the normal limits. It is possible, however, that such patients may have a gastric hypo-acidity though no one has investigated that phase of the problem. It is not untimely to sound here a note of warning; that the determination of the blood calcium requires special apparatus and experience and that if not properly conducted will yield results which will be misleading.

In such conditions as hemophilia, idiopathic purpura, jaundice, etc., associated with prolonged coagulation or bleeding time, there is no reduction of the blood calcium, hence the administration of calcium to such cases is of no benefit. In short, we must bear in mind that where the calcium level of the blood is normal, it is useless to feed calcium with any hope of securing improvement in the condition for which it is given.

To sum up:

Calcium requires an acid medium for its solution and probably also for its absorption.

Tetany, active or latent; some cases of active rickets, and the uremia of nephritis comprise the group of conditions that we know to be associated with reduced blood calcium.

Special care must be exercised in the interpretation of results of blood calcium determinations.

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#### DISCUSSION.

Dr. L. R. DeBuys (New Orleans): This paper of Dr. von Meysenbug is not only interesting, but instructive. It covers the subject of the metabolism of calcium in the body. Some things that he has mentioned should be emphasized, others we may refer to and add some information that we have gained within the past year or so in connection with this interesting subject.

I wish to refer to one statement in the latter part of the paper with regard to the various conditions now attracting attention from the standpoint of calcium metabolism, namely, hay fever and asthma. It is believed by some that the administration of calcium will be of assistance in these conditions. The hope of relieving these conditions by the administration of calcium is not to be expected in those cases in which the blood calcium is already normal, as no good will come through the administration of more calcium. Just a short while ago I saw four generations in which there were evidences of an increased nervous irritability, as shown by the presence of the Chvostek sign. In the infant there were marked indications of tetany, and in the mother, grandmother, and great grandmother there were marked Chvostek signs. It is interesting to note that the blood calciums of the mother, grandmother and great grandmother were normal. This is not the first instance of the kind that has come under my observation, but it brings out the fact of the possibility of an adjustment in the system after a primary hypocalcemia.

In calcium metabolism there are three things that should be remembered. The feeding of the calcium, the retention of the calcium, and the excretion of the calcium.

The diseases most interesting in infancy from the standpoint of calcium metabolism are Rickets and Tetany. There are two types of Rickets, the one with the relatively high phosphorus and the low calcium and the other with the relatively low phosphorus and high calcium. The phosphorus, however, seems to be more frequently lowered. We have just finished a piece of work which will be presented before the American Pediatric Society which brings out one of the interesting facts in calcium retention, namely, the effect of sunlight upon the deposition of calcium. The ultra violet ray is supposed to have the effect of increasing the deposition of calcium. The effect of the sunlight and the ultra violet ray in promoting the calcium deposit was clearly brought out by Hess of New York and others. I remember several years ago when going through his institution seeing one white baby who from the effects of the sun had a marked sunburn so that it was as black as almost any colored baby I have seen. This case was one in his study upon the effect of sunlight in Rickets.

It should be remembered that a case of Rickets may be inactive and still show some clinical manifestations, as for example, costal bleeding, epiphyseal enlargement, flaring ribs, etc. The activity of Rickets, however, is best shown by the chemical examination of the blood.

It is interesting to know that cod fish secured at different seasons of the year have livers which contain variable amounts of oil. To be brief, the oil secured from the livers of the cod fish before the spawning season, contain a greater amount of oil with higher anti-rachitic properties. After the spawning season, not only do the livers contain much less oil, but they proportionately contain less anti-rachitic properties. While speak-

ing of cod liver oil, as one of the agents necessary in the disposition of calcium, we should bear in mind that many of the cod liver oils obtained on the open market are found ineffective, and have a notable deficiency in the anti-rachitic properties.

I remember very distinctly the case Dr. Menage refers to. He was the son of one of our confreres, a child of about seven or eight years of age, who was a spasmophilic. It is customary in these cases to give calcium. This child was given ten grains of calcium lactate three times a day. Coincidentally his hair fell out quite considerably. I referred him to Dr. Menage, who called my attention to a French article referring to a similar condition. I might say that the dose of calcium given was the usual amount for a child of that age. I have never seen this particular occurrence in any other child or individual.

Dr. I. I. Lemann (New Orleans): I have been interested for some years in a possible analogy between the voluntary muscle spasms of tetany and the spasmodic contractions of involuntary muscular fibres of the bronchi; that is to say, the possibility of the analogy between bronchial asthma and tetany. For that reason, some time ago, I asked Dr. von Meysenbug to make some observations upon asthmatic patients. These are the patients he has spoken of tonight. He has not found any change in the calcium content of the blood. Dr. Pottenger of Los Angeles has reported several cases of bronchial asthma relieved by intravenous injection of calcium. His report, however, contains evidence which throws some doubt upon his thesis. His patients came to Los Angeles from a distance. We all know what effect change of climate has on bronchial asthma, and we do not know that the effect was due to calcium and not to change of climate.

I am very much interested in calcium metabolism. For example: there is in the current number of the *Annals of Clinical Medicine* a report from Mayo Clinic by a former Tulane graduate, Dr. Barrier, in which large doses of calcium were given patients with chronic nephritis, and these large doses of calcium brought about marked reduction of edema. However, he reduced sodium chloride in the diet and replaced it with calcium. How much of the reduction of edema is due to the reduction of sodium ion and how much to calcium administration is to be studied.

In the case of oxalic acid poisoning to which Dr. von Meysenbug referred we secured an autopsy. We did not find in the kidneys the characteristic calcium oxalate deposits which have been reported in earlier cases.

Dr. F. W. Parham (New Orleans): I would like to ask the doctor to say something, before closing, in explanation of the fact that calcium chloride reduces the coagulation time and is a distinct prophylactic against hemorrhage.

Closing: Dr. von Meysenbug:

As Dr. DeBuys said, in answer to Dr. Menage, you cannot feed too much calcium. We cannot raise the blood level above normal; that has been shown a number of times. The excess calcium in the food is never absorbed into the blood.

The cases of asthma, with reference to Dr. Pottenger's paper, treated by intravenous injections, are interesting but, to my mind, cannot incriminate calcium at all. We are quite likely to get a transient relief of spasm by flooding the blood stream with calcium but it does not mean the

condition is due to an underlying deficiency of calcium any more than you could say that mitral stenosis is caused by lack of digitalis in a patient's system. It has been shown that calcium injected intravenously is very quickly eliminated. Dr. Denis, injecting calcium into a lactating goat found that there was no increase of calcium in the milk, the injected calcium being quickly eliminated. Three hours after the injection the blood calcium was still about 40 per cent above normal, but at 12 or 15 hours it had returned to normal. I have been asked if the para thyroids had any effect on blood calcium. They probably do control the calcium level, but just how, we do not know. I want also to emphasize before closing that you cannot consider calcium as an isolated substance. Other salts, gastric and enteric acidity as well as the acid-base balance of the entire body enter into reactions with calcium salts. We are accustomed, before operations, to determining the coagulation time and if this is prolonged above the normal of five minutes, we feed the patient calcium lactate. It usually does not shorten the clotting time because there is no calcium deficiency in the blood. On the contrary, in such diseases—as tetany and uremia where we find reduced blood calcium level we do not have prolonged clotting time; furthermore the hemorrhagic diseases, (the purpuras scurvy, hemophilia, etc.) are not associated with hypocalcemia.

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## EXTERNAL OTITIS: ITS CAUSE AND PREVENTION.\*

G. E. ADKINS, M.D.,

JACKSON, MISS.

The caption "External Otitis" is a term used to designate an inflammatory process (acute or chronic) involving the soft structures of the ear, namely the auricle, external auditory canal, and the external surface of the tympanic membrane.

External otitis like most other chapters in medicine has two principal causes that have their respective sub-headings, namely local and systemic.

Under local causes there are many sub-headings that might be mentioned, however I prefer to put them under two headings and call them irritants and infections, and these two causes are in many instances dependant one upon the other, for it is my opinion that infections that gain entrance to the soft structures in and around the ear, without passing through a broken or denuded skin surface, are very very few, therefore I should say that an irritant would be by far the most potent if not the only exciting cause for the cases of external otitis that have a local cause.

Under local irritants I find that constant or frequent moisture stands far in advance of all others and it is this condition that

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\*Read before Mississippi State Medical Association, Jackson, Miss., May 13-14, 1924.

we know so well as the "swimming pool" ear, and it does not mean that one must go in a swimming pool to produce the condition, for it is due to moisture that finds its way into the canal from any source, and moisture that does not necessarily take with it infectious microorganisms.

Remembering that the external canal is lined with skin; not a mucous membrane; and that this same skin is reflected over the external surface of the tympanic membrane; and that owing to its location it is not subjected to the external forces that give the balance of the body coverings a higher degree of resistance to irritants; but sun-light and air seldom if ever coming in contact with it makes it more susceptible to an irritant.

It is the dermatologist who tells us that to treat a skin irritant successfully it must be kept dry and free from irritating substances, and it may be that if it were not for these conditions known to us as external otitis occurring in and about the ear they might be in the hands of the dermatologist where they probably belong after the diagnosis is made, and when I say after the diagnosis is made I mean no reflection on the dermatologist, but the fact that it must be differentiated from middle ear conditions that might prove fatal to the patient if not dealt with from that standpoint leads me to this statement. It is not always easy to say whether we have an external otitis to deal with or a mastoiditis. And again it is like all other chapters in medicine; a diagnosis is to be made before intelligent treatment can be instituted.

I have laid considerable stress on the fact that I charge constant or frequent moisture in the external auditory canal as being the most frequent local cause if not the whole exciting local cause of external otitis.

Doubtless all of you have noticed the effect of water on the skin after immersing the hand in water for only a few minutes; a good example of this is the rubber glove on the moist hand which prevents evaporation of the moisture for the period of an operation, and this is moisture that would likely not be infectious, but leaves the skin wrinkled and shriveled after which a certain amount of desquamation must follow before the skin is smooth again. The point I wish to make is that if this condition should be constantly going on as it is in the auditory canal; a canal that is not dried out by air and light that the skin would soon desquamate to the point of an abrasion in which infection would surely follow.

Moisture gains entrance into the canal and if not dried out sets up the desquimatory process, the products of desquamation soon is sufficient to plug or almost plug the canal; this prevents evaporation of moisture and enhances desquamation until the skin is abraded and infection follows. On looking into the canal of an ear that has been subjected to constant moisture for a few days one can see the springing up of the products of the yeast fungi that grows only in the presence of constant moisture; and it was to relieve just this condition that pharmaceutical houses put out and recommended the use of Bulgarian biccillus in the external canal in cases of otitis. To them it was an imperical remedy, but to us it bids fair to become a rational one.

The class of cases that I have just described is that class that we as otologist see and after cleaning the canal apply a swab wet with borated-alcohol and prescribe borated-alcohol to be dropped into the canal once daily and it usually recovers without further attention. Usually when these cases are referred or come to us from some one else we have to explain to them why it is not a good idea to irrigate the canal two or three times daily with warm water or warm boric-acid solution for they likely will have had it prescribed by their physician.

The other class of cases that I would call your attention to is that class that has a local manifestation of some condition foreign to the ear.

Again remembering that I have laid stress on moisture in the ear as being the cause of possibly all cases of external otitis; and that the external auditory canal is covered with a delicate skin; and skin that has a low resistance due to the fact that there are no external forces (such as sunlight and air) to harden it, and remembering that in digestive disorders we have a reaction in the skin locally that we know as urticary and that urticary attacks the most delicate area of the body surface, and that with urticary we have a local weeping or moisture of the skin, brings us face to face with that type of case that does not respond to the local treatment just outlined; but takes to the consideration of the gastro-intestinal tract where urticary most likely originates.

I said early in the paper that the cases of external otitis that came to the otologist might go to the dermatologist where they likely belonged, if it was not for the fact that the lesion was in and around the ear; and I might say that the second class of

cases might go to the gastro-enterologist and receive a more permanent cure than at the hands of the otologist.

#### DISCUSSION

Dr. J. G. Lilly (Tupelo, Miss.): I would like to ask Dr. Adkins what organism he finds to be the most constant in these cases, and what one causes the offensive odor often present.

In the cases Dr. G. L. Brown and myself have examined, by smear and culture, we found the *Staphylococcus* in almost pure culture, and in two by smear we found a large diplococcus, but lost it in culture.

Dr. E. F. Howard (Vicksburg, Miss.): The fact that the modern, more-or-less-sanitary, swimming pool contributes proportionately about as many cases of external otitis as the old-fashioned "swimming hole" would be a point in favor of the doctor's argument.

### A STUDY OF FIVE HUNDRED WASSERMANN REACTIONS CONDUCTED BY THE PROPOSED KOLMER STANDARD, THE ORIGINAL AND THE BASS-JOHNS METHODS.\*

F. M. JOHNS, M.D.,

AND

W. E. JONES, M.D.,

NEW ORLEANS.

Under the auspices of the Research Institute of Cutaneous Medicine of Philadelphia, Dr. John A. Kolmer, with the assistance of Drs. Brown, Matsunani, Flick, Rule, Trist and Yagle, has been engaged for the past few years in a most exhaustive study of all phases of the Wassermann reaction with the view of standardizing each factor entering into this test. (1)

Many of the steps proposed in the production of the various reagents constitute important additions to our knowledge of the factors entering into the standardized production and titration of such important reagents as complement, hemolysin, antigen, etc. The production of an antigen that permits the use of at least ten antigenic units, which amount is less than one-tenth of the anti-complementary dose, and which can be manufactured with almost complete uniformity, is easily the most outstanding result of the work and one that more than justifies the enormous amount of labor these studies represent. It is our opinion that the universal adoption of this highly sensitive, extremely safe and uniform antigen would do more to eliminate

false positive reactions and standardize the Wassermann results from different laboratories than any of the various changes proposed. This is rapidly being recognized, as shown by the specification of "Kolmer Standard Antigen" on the laboratory reports of many representative institutions.

The summation of Kolmer's work resulted in the proposed Kolmer Standard Wassermann, the essential features of which include elaborate titrations of all reagents each day, minimum inactivation of the patient's serum, use of the Kolmer antigen, and 18 hour ice box fixation of complement.

Here in New Orleans we have been accustomed to use one of the so-called "Original" Wassermann reactions (anti-sheep system, 2 units of complement, sensitized cells, thermostat fixation of complement, Noguchi and cholesterinized antigen), together with one of the fresh serum modifications, such as the Gurd, (2) usually simply designated as a "Tschernogubow," or the Bass-Johns modification of the Gurd reaction. (3) The former test we have usually relied upon as a rather gross but reliable test that was preferable for diagnostic purposes where caution is more imperative than extreme sensitiveness to weakly positive specimens. The latter tests have been continued since 1910, despite the possibility of an occasional false positive or "proteotropic" reaction, because of a very evident high degree of sensitiveness which was utilized principally in following treated or known syphilitic cases.

The published accounts of the great superiority of the Kolmer test quickly lead us to a study of his method, using reagents prepared in Kolmer's laboratory. Comparison with our usual technic in a series of several hundred tests, together with a close clinical investigation of cases in which differences were disclosed, convinced us that the Kolmer test was more sensitive than the "Original" test we had employed. The apparent superiority of Kolmer's antigen over our former Noguchi and cholesterin-fortified antigens lead us to make a comparison of the various methods using the Kolmer antigen. The results obtained form the basis of this report.

All reactions were carefully checked and where differences resulted between the three methods, the entire series was repeated. Spinal fluids for the Bass-Johns reaction were furnished hemolysin (com-

\*Read before the Orleans Parish Medical Society, May 12th, 1924.

plement-amboceptor) from pooled negative human sera carefully titrated.

In the series, six additional sera had to be substituted, five for the Bass-Johns on account of lack of hemolysin, and one spinal fluid for the Kolmer.

The results of the series are tabulated as follows:

Total number of cases.....	500
Positive by all three methods....	63 (12.6%)
Positive Kolmer and Bass-Johns (doubtful or negative Original)	75 (15%)
Positive Kolmer (doubtful or negative Bass-Johns Original negative)	87 (17.4%)
Positive Bass-Johns (doubtful or negative Kolmer Original negative)	82 (16.4%)

An analysis of this table shows that 63, or 12.6%, were positive with all three methods. The Kolmer Standard and Bass-Johns agreed to the extent of 12 more, making 75, or 15%, of positives.

Of the 12 specimens found positive by the Kolmer method only, six were from patients who had definite evidences of syphilis as shown by symptoms, history or spinal fluid findings. In one case there was no evidence of syphilis; and in five no history was obtained.

Of the seven positive only with the Bass-Johns test, five had definite symptoms or history of syphilis, and the history of the other two was not obtained.

From the experience gained in carefully performing almost one thousand Kolmer tests, we believe that the proposed Standard test gives a larger number of correct positives than our former methods, and that while exercising the extreme care insisted upon by Dr. Kolmer in the preliminary titrations that the test is very accurate. The new test is closely approached in sensitiveness and specificity by the fresh serum modifications when performed with the same care and reagents.

We have experienced some little difficulty in always obtaining the exact complement titre necessary at the end of the long ice box incubation period. The complement reduction in the presence of antigen over this period of time results in the possibility of a false positive reaction when the titre falls sufficiently to encroach on the anticomplementary zone, as shown by delayed hemolysis in the antigen controls. The tendency toward the production of false positive reactions is particularly noticed when testing spinal fluids.

## DISCUSSION

Dr. W. E. Jones: The subject of Wassermann variation is one of the hardest problems to solve that has confronted the laboratories since the advent of the Wassermann reaction. We often ask ourselves why one laboratory will report a positive and two others a clear negative on the same blood. There are variations in all examinations involving the human factor. In addition to the large number of methods employed in running a Wassermann, we have a large number of biologic reagents to be prepared and standardized. There are just as many different technics as there are technical laboratories. The personal equation comes in for a large number of variations and, last but not least, the constitution of the patient's own blood is subject to considerable variation. We have found with the quantitative Wassermann that very often a strong positive blood would give a definite positive with one-thousandth of a c.c. of serum and in another patient with about the same clinical symptoms it would require as much as one-tenth of a c.c. to get a good positive.

We believe that any laboratory employing only one technic is apt to make a good many mistakes, especially if they employ the modified original. The Kolmer method is more apt to pick up a positive in latent cases and in old, treated cases. Nearly all laboratories will agree on definitely positive blood. It is the weaker ones which are subject to variation and sometimes to variation even in the same laboratory.

Dr. W. H. Harris: I unfortunately came late and missed the main paper but heard Dr. Jones' discussion and by the notations on the black-board one can appreciate about the contents of the paper. The question of pseudo-negatives and pseudo-positives are indeed serious factors. The modification of the Kolmer is aimed at attaining specific results avoiding if possible, a false positive and procuring a higher percentage of positives. Judging by what I see on the board Dr. Johns and Dr. Jones have obtained somewhat better results with the Kolmer method than with the several other methods paralleled. I think that, of course, the most important feature of the Wassermann reaction is the character of antigen and the careful titration of this component. Individual antigens prepared in an apparently identical manner will vary greatly in their antigenic curve. Kolmer claims that the antigen prepared by his modified method yields an antigen with a very broad curve. This is the type of antigen that is most desirable; one that with a known negative blood will give a clear negative although 20 or 30 binding units have been employed. It occurs to me that even if we do not adopt the Kolmer method as a whole a thorough trial of his modified antigen should be given so as to standardize to the greatest extent the results of the serologists of our society. I would be pleased to meet with these serologists in New Orleans to see if we cannot adopt some system of choice with a view of standardizing if possible, our results. It occurs occasionally that laboratories give contrary reports which to say the least is disconcerting. If we have latent syphilis and get a negative result wherein a specific weakly positive is possible we are doing much harm as such a patient may develop tabes or other forms of nervous syphilis. On the other hand, if we get a pseudo-positive and the patient has no syphilis, we are doing tremendous social personal and financial injury.

It must be appreciated that the Wassermann reaction is as a whole a trustworthy and valuable test when properly carried out and that such a paper as presented is aimed at correcting as far as is possible the percentage of error that is inherent in all human procedures.

Dr. J. A. Lanford: The standardization of the Wassermann is most important, and I feel that the work of Dr. Kolmer along this line is very commendable and, as a whole is meeting with considerable success. However, I am inclined to the conservative side of the Wassermann reaction from the standpoint of diagnosis, and feel that I would rather occasionally miss a Wassermann that should be positive than to report an erroneous positive reaction.

We must not lose sight of the fact that clinicians should rely on something else than the laboratories for their diagnosis and if these clinicians feel that there is any doubt in their minds that the patient has syphilis, in spite of a negative Wassermann, they should seriously consider their clinical findings and subject the patient to a therapeutic test. I have seen too many cases, among the medical students, whose days and nights were made miserable because their blood gave a weakly positive Wassermann reaction, done by someone who used a modification and a very sensitive antigen. It has ruined their lives for months and years, even though they had no history of a lesion and no symptoms of the disease. I feel that a weakly positive Wassermann in these cases should never have been reported and certainly not told to the patient. If the clinicians would rely on their own observations and their own therapeutic findings in handling these cases they would find out which is right: weakly positive or negative.

Dr. E. Denegre Martin: I listened to what Dr. Lanford said with a great deal of interest. I have learned that "weakly positive" means nothing, it must be positive. About six months ago a man came into our office who for two years had been gradually running down; he was a wreck. Though he had his appendix removed his condition did not improve and finally I said to him "something is mentally wrong with you." He broke down and began to cry. He told me that two years before, while working in Mobile, he had had an abrasion on his penis. He went to a physician who obtained a specimen of blood which he sent to a distant laboratory to be examined. Although the abrasion disappeared in two or three days he returned to the physician who told him the examination showed he had syphilis, explained to him the tragedies of the disease, and charged him \$150.00 for the treatment, which he had a hard time obtaining as he did not want his family to know of his condition. The impression made on this young man was such that he shunned company. He had a sweetheart and broke off the engagement. There was absolutely no suspicion of a lesion. If that physician had had more faith in his own diagnosis and had been more honest with his patient this error would never have occurred.

This is just one case; I hear the same of a number of others. As I understand it, weakly positive is no certainty at all. This is a very important fact to bear in mind and those of us who have only suspicious cases should be pretty careful about the impression conveyed to patient. The man I spoke of has been practically ruined for life. I do not think I will ever be able to correct the first impression made. If we suspect syphilis, we should also explain the possibility of

a cure. Why ruin lives because of doubtful reports?

I was delighted to hear Dr. Lanford's discussion. I remember a friend telling me of a technician he had employed, who after some little time wrote to the pathologist who had taught her and asked him for Heaven's sake to correct her technic, for even the preachers she examined had syphilis!

I do not understand how reports can be reliable from laboratories at a distance; they are often improperly packed, spoiled by time, etc. We cannot be too careful in such matters. Laboratory reports should be confirming only in diagnostic value.

Dr. C. C. Bass: I think the paper of Drs. Johns and Jones and the discussion that has followed it should serve to emphasize to us the importance of proper interpretation of laboratory findings, especially with reference to the Wassermann. The figures presented by Drs. Johns and Jones show a variation from one extreme to the other of about 33 1-3 per cent more positives gotten by the Kolmer method alone than with all three methods combined. The question arises as to which to place the most confidence in. I do not think it is particularly important whether we place more confidence in one or the other, provided we are alive to the weaknesses of all of them.

To diagnose syphilis on the test alone is unjustifiable. I do not believe it is the proper procedure and do not believe the doctor is showing the proper consideration for the confidence placed in him if he exercises so little knowledge and judgment that he has to base his diagnosis of syphilis entirely on the Wassermann reaction, or on some other man's test, whether he knows him to be able or not. I believe we should make special effort to place proper interpretation as to the diagnostic significance of this and all other laboratory tests, combining the information furnished with all other information in each case. If I were practising medicine, I should certainly want the information furnished by the Wassermann test, but should not diagnose syphilis on it without other information, even if I did the test myself.

Dr. I. I. Lemann: I would like to reinforce what Dr. Jamison said. I remember some years ago a good clinician reported a long series of cases in which Wassermans had been made, from patients seen in the office and in practice, and he gave quite a considerable percent. of positive Wassermans that contrasted with the routine Wassermans in my own experience, where I see only occasionally a positive Wasserman (in 1 per cent of cases). I have adopted the routine attitude Dr. Jamison has suggested and especially with regard to positive Wassermans. Instead of accepting the positive and rejecting the negative, I accept the negative and reject the positive unless there is corroborative evidence in the history or physical examination. If I get a positive Wassermann I have the Wassermann gone over.

I remember some very worried nights I passed myself because of the shock of the report of a positive Wassermann, done routinely, in the case of a patient in whom I was personally interested. The reaction was done as a matter of routine before the operation. A second reaction from the same laboratory was negative and third reaction from the same laboratory was negative. A specimen of the blood was divided and sent to two other laboratories; both reported negative. I



found myself having spent sleepless nights and gone thru this for nothing.

I think if Dr. Johns' paper has done nothing more than bring up this discussion and attitude proposed by Dr. Bass and Dr. Jamison, it has accomplished a great deal.

Dr. Elizabeth Bass: I would like to stress the fact that, although Dr. Johns read his paper in less than ten minutes, it has taken him many months to carry out this tedious and painstaking work and I, for one feel that we owe him a debt of gratitude for what he has done.

Knowing that he was carrying on this work it was with "fear and trembling" that I felt lest he should in the end condemn our method of making the Wassermann test but it is with a "sigh of relief" that I have listened to his conclusions this evening. In his final tabulation he reports 12 positive tests by the Kolmer method, alone, 6 of which have definite histories and 6 negative while there were 7 by our method and 5 gave definitely positive histories while 2 did not. Apparently nothing is particularly gained in the Kolmer technique.

I would like to ask Dr. Jones if he noticed any difference in bloods collected after full meal especially those containing high percentage of protein?

## INJURIES AND INFECTIONS OF THE HAND.\*

E. DENEGRE MARTIN, M.D.,

NEW ORLEANS, LA.

With the advent of industrial plants, springing up all over the Southland, minor injuries are becoming more frequent and with them the necessity for a better knowledge of their treatment. The price of labor, which was at one time cheap, is now in many instances almost prohibitive and the loss of time plays an important part in all industries. The physician, therefore, who can keep any plant near its normal working basis becomes in himself an asset to the company and can demand remuneration in proportion to results.

The human hand, the most wonderful piece of anatomical construction, is from necessity most liable to injury; injuries ranging from a splinter driven under the nail to one of sufficient gravity to destroy the hand. The subject of this paper was suggested to me by members of the post-graduate class who do much of this work throughout the country. Noting their keen interest in all cases of this character, I determined to bring the matter before you for discussion. To fully appreciate the difficulties to be overcome, we must have at least a fair knowledge of the anatomy of the hand. In the space of time allotted me, I must confine myself to the briefest

descriptions of the injuries, either infectious or traumatic.

Infections: No matter from what source, should always be treated with the greatest respect. The infection through a hair follicle may be a source of serious trouble, and when traumatized spreads rapidly. Nature's first efforts in such conditions is to place a barrier around the seat of infection and though these often point, discharge and disappear, exceptions are too frequent not to sound the alarm in every case. When superficial, though painful, they rarely give trouble if not traumatized, that is, punctured or squeezed, such a procedure is often sufficient to spread the infection. A long and varied experience has taught us that a very simple procedure gives the best results. The hand is kept bathed in a 4 per cent solution of boracic acid; as soon as pointing occurs, the pustule is punctured and the pus aspirated with a vacuum pump. Where this is not available, a large test tube is secured, a drachm of alcohol poured into it and heated to the boiling point. It is then put over the pustule, care being taken to prevent the alcohol from flowing against the hand, a cloth dipped in cold water is then placed around the tube, the rapid cooling creates a vacuum and the pus is aspirated with little pain and discomfort to the patient and no trauma to the tissues. Very frequently one application is sufficient to stop the infectious process. Where the infection has spread to the deeper tissues and the tendons involved, the fingers, or better still, the entire hand is splinted, to prevent the aspiration of the pus along the tendon sheath. Nothing is more important. Never open a suspicious spot along the surface of the hand or arm until it points or fluctuates, otherwise there is great danger of spreading the infection. In all cases every part of the hand involved should be kept saturated with a boric solution. Its effect is almost magical and in our experience far ahead of anything so far suggested. Only recently I heard this subject discussed by one who extolled the use of Dakin's solution. This physician was in charge of a large industrial hospital, where the solution could be made fresh and applied by experts—and this is absolutely necessary as it is most irritating to the tissues which must be protected with vaseline strips and where it has its advantages in certain deep and extensive wounds—I say unhesitatingly, in the treatment of any infection of the hand Dakin's solution has no advantage over boracic acid solution

\*Read before the Louisiana State Medical Society, Opelousas, La., April 22-24, 1924.

which is harmless and can be prepared and applied by any one. The medical profession is like the rest of human nature, too often carried off its feet by the glittering accounts of some new discovery. We are too prone to rush into print with the glowing accounts of success, but often slow to correct our errors. *Finally*, the best treatment for infected wounds of the hand is application of boracic acid constantly applied and kept warm by covering the wet gauze or cotton with some impervious material to hold the heat, making the solution more efficacious. Puncture the pustules when they reach the surface and aspirate with a vacuum pump or test tube. In case of a phlegmon of the terminal phalanx (bone felon) or an inflamed area, it is best not to use local injections as this frequently spreads the infection and is exceedingly painful. Instead use *Ethyl Chloride* by inhalation. The cone is placed over the face, the patient directed to hold up one hand and the ethyl chloride sprayed on the cone. When the hand drops the patient has lost consciousness and the phlegmon can be opened.

*Bone felon*: is the one exception to the general rule and this should never be forgotten. The anatomical construction is such that superficial infections, even the prick of a pin, will lead to serious complications in a short time. The fibres in the pulp at the tips of the fingers are closely connected with the periosteum and the lymphatics lead directly to it. Infection, therefore, is carried directly to the bone; the pus accumulates between the phalanx and periosteum and is detected by the throbbing sensation, heat and pain in the finger. Like osteomyelitis in other bones a rapid and destructive process goes on and unless relieved by evacuation of the pus, necrosis follows, the terminal phalanx is destroyed, and the result, even when confined to the first joint, is a lasting deformity. Never wait on developments or temporize with these infections. Give your patient an anesthetic, it is in such cases as previously stated, we use ethyl chloride by inhalation, drive a sharp scalpel through the pulp until the bone is reached and make an incision in the periosteum long enough to allow the pus to escape, frequently not more than one or two drops. This is oft-times sufficient to abort the infection before any damage is done by its spread, which under tension is always more destructive.

*Simple wounds*: Wounds, whether clean cut or jagged, so-called contused wounds,

are treated alike in so far as cleansing is concerned. When a wound is made by some sharp cutting edge it is usually easier to clean and when properly disinfected heals primarily. When possible protect the wound with a piece of sterile gauze until the hand has been thoroughly washed and disinfected with a solution of 1-1000 benzine iodine, the wound is then cleansed in the same way and the edges coapted with sutures, clips or adhesive strips as the extent of the injury would indicate. In contused wounds it is sometimes best to pare the ragged edges before attempting to close. Where the trauma is such as to involve injury to the vessels and tendons, when possible, the disinfection should be most thorough under an anesthetic and all cut or torn tissues repaired at once. When done under proper conditions the wound heals primarily. It is most important that such injuries be treated with the utmost care as infection means a long and painful convalescence and too frequently loss of a finger, hand and even life. Never lose sight of the fact that you are treating the most important factor in the human body. The loss of a finger means to some, inability to earn a livelihood. What may appear at first but a slight injury may later develop into a serious complication. All punctured wounds of the hands, whether made with some dull instrument or a blank cartridge should be given antitetanic serum if the hands have been exposed to contamination of any kind. The danger is not in the instrument, but lurks in the skin and when the tetanus bacillus is carried into such wounds it is difficult to dislodge; a prophylactic dose of serum is a wise precaution. I personally have my doubts about its sole efficacy in the treatment of tetanus, either intravenous or intraspinally, many cases of cures are reported by its use, but just as many are reported cured without it. Many persons get well in spite of the treatment. We have fourteen cases reported cured with the use of chlorotone in which only the initial dose of serum was given. The patient should be kept under the influence of the drug until all signs of trismus disappear.

Crushing injuries, or any serious injury to the hand, though coming in a measure under the general rules of treatment, are frequently such as to require special attention and just the slight difference which would bring success in one case would bring failure in another. We should always bear in mind the great importance of preserving as much of the hand or finger as

possible, no matter how small a part of a finger can be preserved, it is often of the greatest value to the possessor. After healing, if for any reason it is found to be an obstacle, as does frequently happen, it is then time enough to remove it and a better plastic operation can usually be done. To go into detail in each instance would require much time and I fear would tire the listener who usually prefers to read about elephants and scorns the mouse, which is far more interesting and much more destructive, but maneuvers in a quiet way and brings disaster frequently beyond repair. If one doubts this reference, go to any assembly of people and ask those who have suffered from injuries of the hand to hold them up, and you will find the "Yeas" will carry. When a finger is so severely crushed that it must be removed, make an effort always to cover the stump with skin, bearing in mind that a crushing injury destroys the circulation beyond the line of trauma and therefore allowances must be made for sloughing. It is often gratifying to see a finger almost severed or so badly crushed that amputation would seem the only alternative, after weeks of coaxing and careful management become again a useful member. Exposed or severed tendons must be given immediate care, suture at once if the continuity is destroyed, otherwise it is not necessary, and cover with skin; in this way they can be preserved. I have seen the entire palmar surface lifted from the hand, the tendons exposed, and yet when such an injury was thoroughly disinfected under an anesthetic and the flap held in place with interrupted suture and sufficient drainage to allow the escape of serum, result in primary union and a perfect hand. *Never forget that upon the initial cleansing and care of the wound depends the result.* Always splint the hand or finger after such injuries as the tendons must be kept at rest.

**Fractures:** Compound fractures come under the previous heading. In simple fractures the injury is usually easy to recognize as manipulation of the parts will cause pain and often crepitus. Oblique fractures of the phalanges as well as split fractures of the terminal phalanx are recognized by more or less persistent pain. The treatment in all such cases means the proper immobilization of the injured parts for at least two weeks. Nothing can take the place of plaster splints in carpal and metacarpal fractures, for these can be moulded to the palm which is concave, and give the comfort and support that no padded splint

can equal. Where the phalanges are involved a light splint of tin, wood, or even cardboard will serve the purpose. The X-ray is, of necessity, a valuable aid in the diagnosis of fractures and dislocations of the bones of the hand, but with little experience, these injuries are easily detected and we should learn to diagnose them rather by studying the cases than by depending upon the report of the radiologist, for this shows only the injury to bones, but not to the ligaments, where the greatest damage often occurs.

In conclusion, "Watch the mouse, you can hear the elephant."

#### DISCUSSION.

Dr. John L. Wilson (Alexandria): Doctor Martin has so thoroughly and efficiently discussed this subject that I feel there is not much I can add. I want to emphasize some of the points the Doctor has made. This whole subject resolves itself into that of preventive treatment, and treatment after the injury has occurred with its resulting infection, and that is the time when the physician usually sees the case. However, when we see these cases early the matter of preventive treatment deserves our first attention.

The Doctor mentioned the local application of iodine, or phenol counteracted with iodine and alcohol. Lately I have been using mercurochrome and I like it very much. It is painless, the patient does not object, and I find it very efficient.

Another thing the Doctor mentioned was anesthetizing the patient. I think too often we temporize in treating injuries of all kinds and rather neglect to give an anaesthetic many times when we should. It does not hurt the patient and it helps the doctor to carry out his treatment more thoroughly and efficiently. That is the point we should all think of. When the patient is anaesthetized institute thorough drainage, and then treatment with the antiseptic lotions the Doctor mentioned.

Another important thing is the splint. This takes us back to the old classical work of Hilton on "Rest in Pain." It is worth while to read that book. Another book we might read is one by Kanaval. I had the pleasure of seeing him do some work in injuries of the hand. The cases he showed were old cases with deformities, cases that had been neglected. I think his book on this subject is well worth reading.

Dr. W. P. Bradburn (New Orleans): There is one point I would like to mention in connection with this subject, and that is more conservatism in the handling of infections of the fingers. Formerly with an infected area around a hair follicle coming three or four days or a week after injury we were prone to make injection into the base of the finger and make an incision over the infection; we found there a hard, necrotic spot and applied the usual wet dressings, etc. In the last two years we have changed from the radical treatment of a beginning infection to the conservative type, and especially so in the more severe cases where they come with general induration varying from a small spot about the size of a dime to larger. We are putting these parts in splints, and in the hospital, if the infection is marked, and using a constant boracic acid bath

a hypertonic salt and watching the case. If you handle it conservatively the spot will begin to soften and the slough will come out and you have not interfered with the original barrier to infection. If you do not, you are bound to spread the infection; but you will find by conservative methods you will have less trouble and as a rule I believe the conservative plan in infection of the fingers is far better in the long run and that our end results will be a larger percentage of cures with less crippling.

Another point was brought forcibly to my attention about a week ago. A case of pain at the end of the finger following crushing injury, diagnosed by a physician as pus, and a deep crucial incision at the flexor surface made. Pain in the terminal phalanx after injury with apparently no external bruising is generally a fracture. If this case had been seen sooner we would have saved two things, first an incision crosswise, and second, an incision lengthwise. The man I believe is disabled, not from the injury, but because of a faulty incision. Make the incision lateral where possible and put it where it does not cripple.

Let us have more conservatism, more wet dressings, more splints, more common sense surgery.

Dr. P. A. McIlhenny (New Orleans): I was very much interested in Doctor Martin's paper. Minor infections of the hand may go on to great and disabling deformities. From a simple needle prick we may have a disabling ankylosis at the wrist, or adhesions in the tendon sheath which may eventually throw that hand out of use and permanently disable the patient.

Splinting is of primary importance in the treatment of simple infections of the hand, but splinting in the position which will render the greatest amount of function. It is much easier to prevent deformity than to correct it. That was most forcibly demonstrated to me only recently when a prominent gynecologist of Oklahoma City was referred to me. He had accidentally pricked his index finger in an operation and treated it superficially until finally he had an arthritis at the wrist with multiple teno synovitis about the wrists which caused numerous incisions to be made to relieve the infection. The hand was splinted in the straight position, wet dressings applied for weeks, and finally recovery with multiple scars producing contraction and adhesions to the skin and fibrous ankylosis of all the bones of the wrist and considerable adhesion in the tendon sheath. When I saw him in January he could move the middle and distal phalanges, but had practically no motion of the wrist. We treated him with various treatments for hyperemia, active and passive motion, until the middle of March, when he was forced to go home, with an apparatus for active and passive motion which he could carry on at home. If that case had been treated with the wrist properly flexed and the arm in the correct position, the fingers slightly flexed, and motion begun with massage as soon as the pain would allow, even if he had an ankylosis at the wrist he could have closed his fingers with greater readiness than with the splint applied with the fingers straight.

Dr. D. I. Hirsch (Monroe): I enjoyed Doctor Martin's presentation because I have been one of the victims. For eighteen months I carried one hand or the other in splints. I thoroughly agree with Doctor Martin and I rise to make one point. One infection in the hand can produce others, especially around the follicles, and I want to make this statement as to the prophylaxis.

Treatment with moisture and heat up to a certain point give good results, but when moisture is applied further than that you get another infection because the skin is softened and the infection gets under the hair follicles. I used carbolic acid and medicaments of all kinds until I learned that the simplest way was to treat these cases with normal saline and boric acid solution, hot, with a splint, and if you apply that you will notice that in a day or two a crust will form at the tip of these follicles. With a sterile scalpel raise it and enough fluid will escape to relieve pain. Continue to soak it until the slough separates; then use a splint and stop the moisture. But I do think if you apply moisture after you have passed that point it distributes the infection.

Another thing you will notice is that after the infection is nearly well and you put on a small dressing with adhesive plaster, under the adhesive you will get infection. After the hand is well if you will paint it with a solution of picric acid and alcohol it sometimes will prevent reinfection.

Dr. C. A. Gardiner (Sunset): We have always heard that personal experience is the best lesson. Before I experienced something of this minor injury affair I was under the impression that it was a minor matter. After going through an infection caused by pus forming at the root of a hair follicle I decided it was a major affair—for three reasons. One was that I was confined to my house for three weeks; second, it was a big financial loss, and third and greatest was that I had this infection opened three times by a confrere of mine. I thought then it was a major affair. It was about ten or twelve years ago when I developed a little fistula at the root of a hair follicle. I opened it with a needle that was not sterile and paid no attention. Infection set in, with the result I have stated. I have had several of these infections since then, but have been more prompt in treating them, so they have been minor affairs. I open them with a sterile needle, take out the hair, cleanse it with peroxide, paint it with iodine, put on sterile dressing and have no more trouble. So I think these minor affairs develop into major affairs.

In regard to bone felons, if we could get our patients to apply early enough so they could be opened before the infection forms we can abort quite a few; but unfortunately they are considered minor affairs and these people do not apply for treatment until pus has formed and the infection has gone to the point where it is difficult to arrest it. But if we could get them to understand that deep incision within 48 hours after the beginning of the infection would abort these felons, we could save our patients a great deal of suffering.

I think Doctor Martin's subject is of great importance to the ordinary physician. Minor surgery is a very important part of our every day practice. Major surgery is confined to a select few, whereas minor injuries are met with by the rank and file of the profession very frequently.

Dr. H. E. Menage (New Orleans): It looks rather presumptuous for a dermatologist to butt into a surgical discussion, but when the surgeon begins to talk about hair follicles I believe we should have something to say.

I agree with the remarks made by Dr. Bradburn, and I would like to add one point in the way of conservatism. Do not squeeze hair follicles; do not squeeze the original infection when it is cutaneous. That applies particularly when the infection is on the upper lip. Many a simple

infection if left alone will allow the patient to recover when other wise it might kill him.

I would like to add to the list of Boric Acid and Iodine applications, a saturated solution of Salicylic in alcohol. It is keratoplastic and will do a great deal of good.

I want to emphasize the importance of a routine examination of the urine in all pustular follicular infections of the skin for sugar, diacetic acid, acetone bodies as well as blood sugar as such an examination may at times be the most important factor in establishing the proper treatment.

I also want to add my dislike for sticking plaster as a dressing in pus infections of the follicles of the skin.

Dr. J. N. Roussel (New Orleans): From what we have heard this morning I think it is quite clear, to me at least, that everything we do for these conditions is as good as another. Every man has a different way of treating them, but they get about the same results. I do nothing that Doctor Martin and Doctor Menage do, and yet I believe I get about the same results that they do. I think it is a well established fact that it does not matter what kind of infection you have, it will last about nine days, and if the patient will allow you to let it alone it will get well in nine days—that is, three days coming, three days at its height, and three days to leave.

I want to say this, Mr. Chairman, and I want to say it from the bottom of my heart, that I hope some day they will put iodine under the Harrison Act. I hope they will not let anyone sell it to any human being. Every patient that comes to you has smeared himself all over with it; you cannot make a diagnosis because he has camouflaged himself from head to foot with iodine. It cannot possibly do any good—it is a joke.

Dr. Denegre Martin (Closing): If you want to start a dog fight, all you have to do is say "Sic 'em." I think this discussion has been fine. I have very little to add, there has been a good

deal of truth told. I myself believe if in many of these cases you splint the hand and let it alone, it will get well; but there are exceptions. There is where experience and judgment count.

In closing I want to call your attention to the danger of tetanus. Many of these cases begin with infections of the fingers, and many of these come from blank cartridges. Several years ago there was an attempt made to throw the blame on the blank cartridge. The blank cartridge is only the means of conveyance. What happens is, that when the child shoots the blank cartridge into the finger which is infected, the infection is carried in. Traumatize tissue and you have necrosis, and it is in a necrotic wound that tetanus bacilli thrive. In regard to the treatment of tetanus, I wish to say we have cured fourteen cases by the use of chloretone, always giving an initial injection of the serum. That should be given wherever there is doubt regarding the infection no matter what the condition is; and in our experience the initial dose is all that is necessary. Give the initial dose and then keep the patients sufficiently under the influence of chloretone and they get well. Give it by mouth, from five to twenty grains, and give it often enough to keep the patient under the influence. When they come out, give it again until the convulsions are absolutely relieved. As a rule they do very well.

I want to report an interesting case that a physician whom you all know brought down to me with an acute attack of appendicitis. I verified the diagnosis and the child was taken in and put on the table, but fortunately, the anesthetist recognized beginning tetanus, by the risus sardonicus. I looked into the matter and found he had shot himself in the finger about fourteen days before. We immediately stopped the operation and put the child under treatment. Ice packs were used and he was kept under chloretone and finally got well. I believe if the condition had not been recognized when it was the operation would probably have resulted in death.



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# New Orleans Medical and Surgical Journal

Established 1844

Published by the Louisiana State Medical Society under the jurisdiction of the following-named Journal Committee.

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**SUBSCRIPTION TERMS:** \$2.00 per year in advance, postage paid, for the United States; \$2.50 per year for all foreign countries belonging to the Postal Union.

Material for publication should be received not later than the twentieth of the month preceding publication. Orders for reprints must be sent in duplicate when returning galley proof.

THE JOURNAL does not hold itself responsible for statements made by any contributor.

Communications should be addressed to: New Orleans Medical and Surgical Journal, 1551 Canal Street, New Orleans, La.

## ERNEST LAPLACE

With the passing, on May 15, 1924, of Dr. Ernest Laplace, New Orleans lost one of her distinguished sons. A graduate of Tulane and former interne of Charity Hospital, he further pursued his studies in Europe under Pasteur, Koch, Lister and Billroth. Upon his return to New Orleans he became professor of Bacteriology in Tulane. Later he received a call from the Medico-Chirurgical College of Philadelphia to accept the chair of surgery. This position he held until his death. During the world war Dr. Laplace served in the army as lieutenant-colonel in the medical corps rendering most efficient service to troops during the influenza epidemic.

Elected to the French Academy in 1903, later he was created an officer of the Legion of Honor by the French Government; in 1923 he was made Knight Commander of the Order of St. Gregory by the Pope.

He invented the first forceps for intestinal anastomosis and was the author of numerous articles on surgery. His loss will

be felt not by Louisiana alone, but by the profession of the Nation.

## PHYSIOTHERAPY

In an excellent exposition of modern physiotherapy recently published by Kovacs (1) the author berates the modern medical curriculum for its failure to assign adequate teaching facilities in physical therapeutics in our medical schools. He feels that ignorance of this subject among medical practitioners is due principally to the above mentioned cause. That many conditions can be permanently relieved and others appreciably benefited by physical therapeutic measures is an established fact. If the regular profession is not fitted to give patients the benefit of these measures they should voice no objection when they turn to chiropractors and like cultists who nowadays realize their value.

It is true that certain medical men who have employed physical therapeutics exclusively have often become overenthusiastic in their claims regarding the value of this mode of treatment. It is irrational to institute physical therapeutics to the exclusion of other recognized medical and surgical measures, when such aids are indicated. Rather we should recognize physiotherapy as an adjunct to our other methods of treatment.

Many of our profession who served with the Colors in the recent war observed, in both surgical and medical services, that a well equipped physiotherapy department forms a valuable adjunct to medical and surgical treatment. The employment of physical therapeutic measures among injured and diseased soldiers aided materially in curtailing the period of hospitalization.

In traumatic conditions, in acute and chronic inflammatory processes, in paralysis, in contractures and in scar formations local physical measures are found of practical value. The agents in physiotherapy at our command may be grouped under these heads: (a) thermic, (b) mechanical, and, (c) chemical.

Of the *thermic* agents radiant light and heat, superheated air, whirlpool baths and diathermy are the most commonly employed; of the *mechanical* agents massage, mechanical vibration, manipulation, active and passive exercises, static wave current, faradic current, galvanic current and sinusoidal current are widely used; and of the

(1) Kovacs, R.; *Physiotherapy in Orthopedics*. J. A. M. A. 83:99 (July 12) 1924.

*chemical* agents ionization and ultraviolet rays give best results.

With the advent of modern psysiotherapeutic apparatus, which must not be confused with the inadequate outfits supplied twenty-five years ago, it is to be hoped that physical therapy in all its phases will be employed and studied on a much wider scale than it is at the present so that ultimately the results of properly indicated and administered treatments will be recorded and published for the benefit of all.

#### THE DOCTOR IN POLITICS

We often hear of the selfish motives actuating politicians, expressed by such phases as "method in his madness," "axe to grind," "nigger in the woodpile," etc. This year, especially, with the national conventions of the great parties, our state legislature in session and other meetings of local interest, have these ideas been brought home to us. In marked and creditable contrast, however, to the general rule, stands the medical man in politics—not that he very often does not have personal ambitions, too, but, generally speaking, whether it be mixed with these hopes for preference or not, he aims, by his advocacy of certain measures or plans, to benefit the masses of the people.

The above was shown by the attitude of Louisiana physicians in their stand on the

several bills of medical interest before the Legislature. Why should we advocate this measure and denounce the other one? Is it because we are afraid of the injury to our calling? No; it is that we feel that a more or less sacred trust has been committed to our care, viz: protecting the public against frauds, imposters and the vicious.

Then, again, at the A. M. A meeting, certain changes were asked for in national laws, for the public good. There were a few doctors at the national conventions; one of these, Senator R. S. Copeland, M. D., was often mentioned as a possible "dark horse" at New York; he was not nominated, but, if he had been and would have succeeded at the polls in November, the public, rather than the medical profession, would have been the gainer in laws enacted at his suggestion; we might venture the assertion, however, that a physician as president probably would, by his presence, favorably influence enactment of laws, which would cause the government to give as much consideration to public health in humans as to that in cattle and trees.

Our conclusion is that, for those of us who have the time and the inclination, it is our duty to give some attention to political matters; if each one shifted the responsibility, no one would do it and the public would be the loser, by the running at large of the fakirs, the ignorant and the vicious followers of certain harmful cults.





J. J. Haralson, M. D.,  
Forest  
President, Mississippi State Medical Association

## TRANSACTIONS OF MISSISSIPPI STATE MEDICAL ASSOCIATION

The public meeting on Tuesday evening was held in the Municipal Auditorium, Dr. George E. Adkins, of Jackson, presiding.

The invocation was pronounced by Reverend R. E. Hough of Jackson.

*Reverend R. E. Hough:* Our Heavenly Father we thank Thee for the many blessings Thou hast bestowed upon us. Thou has given us our lives and the health which we enjoy. We thank Thee for al' Thou hast done for us in days gone by. We thank Thee for the healing remedies that Thou hast placed about us and that Thou hast put it into the minds of men to discover these remedies and appliances. We thank Thee for restoration to health and for the men and women who are giving themselves to the study of the physical condition of men, women and little children that they may have their health, that they may have bodily vigor to go out and in and do the work Thou wouldst have them do.

We thank Thee for this gathering of men and women devoted to the science of healing. We thank Thee for the measure of wisdom Thou hast given and for the remedies which Thou hast placed at their disposal. We pray Thee that they may leave themselves with Thee to be guided in the use of these things, and that under Thy directing care and under Thy good purposes many lives may be spared in our state and that disease and suffering may be put down and the lives of our little children preserved.

We thank Thee for the great work that has been carried on in our state by these men and women, and we pray Thee that the year that is before us may see even greater good accomplished.

Bless everyone here this evening; grant that these men and women may be instrumental in Thee in doing their part in the great work of restoring health in our state. We ask it all in the name of Jesus Christ. Amen.

### *Turning Over the Keys of the City.*

*Mayor W. A. Scott:* I notice here that I am supposed to turn over the keys of the city, and that is what I must decline to do, because when we heard you were coming we took the doors off their hinges, we took the windows out of their frames, and now that you are here we are willing to blow the roof off if you wish. (Applause.) It is true that we still have a jail, but knowing the members of the medical profession as

I do I know they will not go any place they should not.

I want to say to the visitors, however, that while you are here if you violate any of the city ordinances and the police threaten to do anything with you, just let me know and I will have the police put in jail instead of you—and I will send George Adkins along with them. (Applause.)

### *Welcome on Behalf of the City of Jackson.*

*Governor H. L. Whitfield:* I am glad to have the opportunity of facing so many doctors. I am glad to have them at my mercy. I have taken a good many bitter things at their hands, and now it is my inning. I do not see why they selected me to deliver the address of welcome for Jackson. I think it is because my friend, Scott, has been doing it so long and his reputation for veracity is getting to be so well known that it needs a little bolstering.

But I want to say that I do love this old town, and if the work a man does and the price he pays to become a citizen of Jackson is an indication of how he values that citizenship, I want to say that no man ever paid a higher price to be a citizen of Jackson or any other town than I paid. I spent the earnings of a lifetime; I mortgaged the future; I spend about ten months of the hardest work any man ever attempted to do over the roughest roads. I have ridden more miles in a Ford than any doctor here. I lived in the best town in the world, but I left it to come down here, so you see how I value Jackson citizenship, and I suppose they want me to tell you what a great town it is.

We all love our home town—we all do. No other town can take the place of our home town, but at the same time I think Jackson is more than a town for its citizens. In a sense it belongs to the people of the state of Mississippi. The capitol is here and many state institutions are here, and this Auditorium is the meeting place for the citizens of Mississippi. Here is where they get acquainted, here is where they exchange ideas and express opinions in regard to many, many problems which present themselves to the people of the state of Mississippi. We have recently had many conventions of various kinds here.

I am glad to welcome the doctors, and I want to say this about doctors. I have had something to do with Mississippi affairs for twenty-five years. I think prob-

ably my life has been as closely interwoven with the life of the state as that of any other man in it. I have watched its progress, I have noticed how we have succeeded in solving our problems, and although I am not a physician I want to say that I believe there has been more progress made by the doctors of Mississippi than by any other profession in the state. (Applause.) I want to pay tribute to the splendid health department that we have. I had occasion to look at your report during the last legislature on preventable diseases, and the progress has been marvellous. I believe the time will soon come when we will educate all our people about these contagious diseases that are preventable, so that these diseases may be driven from the confines of our state.

I regret to know that the executive secretary of the State Board of Health, who is directing in a particular way this great work, is to leave Mississippi. I regret to see him go. (Applause.) As to his successor, I want to say that the State Board of Health will, of course, get the best men they can to carry on this great work. I hope it will never be involved in politics. (Applause.)

We have a great state, a state with great resources. But the greatest resource of a state is its people, and anything that has to do with vital resources is the most important work that can be carried on in a state. We will never develop our state beyond its people. Have the people well and strong, have the people well trained in mind, body and hand, people of character, and we can develop the greatest civilization the world has ever known; but without people you cannot do it. The physical man is the basis of everything. I believe it will only be a few years before the preventable diseases will have to go—our people will be educated, and then it will be time for you doctors to put the back band up so you can set the plow to go deeper. I hope the time will come when every individual born into this world will have the right thing done for him at the right time so he can grow into a fine man or woman. I want to see the time when people are grown right in this country and when the larger part of your work will not be getting rid of communicable diseases, but devoted to the great science of growing people right. It is the greatest task ever given to men or women, to take these little infants that come to this earth, and knowing the laws which control their unfolding see that those conditions are provided which mean the development

of these babies into the men and women they ought to be.

You are more than doctors, you are citizens of Mississippi, and God knows you go everywhere, you do not hesitate to talk politics. (Laughter.) I stand before probably the greatest bunch of politicians in Mississippi. Now as you go around take every occasion to inculcate in the people higher ideals in regard to their relations to the state. I want to see the time when people will look on the state of Mississippi with love and reverence and not as something to be exploited as so many are doing at the present time. I want to see the boys and girls taught in the schools that Mississippi will soon be committed to their hands, that we are going through a transition period. It will not be long before a great power cable will cut across our state and varied industries will come to Mississippi. I am no longer concerned as to whether Mississippi will be developed; but the thing that gives me the greatest concern is whether we will be ready for that development when it comes. I wish we could get the boys and girls of this state to visualize the state as it ought to be, I wish we could show them their great opportunity, and after they get this vision they will be willing to work and sacrifice and withstand temptations in order to prepare themselves for the time when this great work will take place and they can be leaders and not have to stand on the sidelines.

We ask your profession to help us make the state of Mississippi the best place in the world to live and raise a family. (Applause.)

*Welcome on Behalf of the Central Medical Society.*

*Dr. John Darrington (Yazoo City):* Mr. President, Ladies and Gentlemen: I have some good news for you. My speech is very short. In fact, if I had known I was to follow the Governor in his eloquent speech I do not believe I would have appeared at all. It seems to me we are following the Chinese custom—serve the cream and cake, and then bring on a very poor quality of soup.

We want this meeting to be free and easy—nothing formal about it. We have enough troubles at home and we do not come down here looking for any more trouble from the speakers. For the benefit of the laymen in the audience I would like to say, do not be afraid on account of the number of doctors surrounding you, for there will be no operations. And I can as-

sure you that you will not be put to sleep by the oldest anaesthetic known—vocal anaesthesia.

My task is to present an address of welcome from the Central Medical Society to the visiting doctors of the state, and I might say to the laymen that your opinion of doctors and ours are probably different. You see one side only, and we know both sides. It is a pleasure for me to know that the public's opinion of doctors as a whole is favorable. Of course your attitude towards the doctor depends upon your health. If you are in perfect health, he is an ordinary citizen; if you are sick he is of great importance. The public as a whole is not a good judge of doctors. If you were able to appreciate certain qualities and qualifications necessary you would not be led astray quite as often as you are by these various cults the basis of whose treatment, if you analyze it, would be absurd. But as a whole the public feels kindly toward the doctors and I can assure you that the doctors feel very kindly toward the public. But the doctors' attitude towards doctors is one of gratitude and appreciation. One thing that should be appreciated in a doctor is his interest in his cases. When a man goes to the operating table he is like these little lizards the women wear—every man is the same color on the operating table. In other words, you do the best you can for your patient no matter who he is nor how he stands in the community. And doctors make sacrifices that the public knows nothing about.

What have doctors done? They have practically eliminated from this earth some horrible diseases. I will only mention three: smallpox, bubonic plague and yellow fever. A glance at the pages of history will tell you what that means on this earth. Today we are not in dread of epidemic on that account. While nations have been wiped out by these diseases and the people here tonight can remember when the trains were not allowed to stop in Jackson, mail was fumigated and business was interrupted and people went North to get rid of yellow fever. That will never happen again. Who did it? Doctors. We still have diphtheria, typhoid fever and malaria, but the time is coming when these will be eliminated. The end is not in sight, however. The ductless glands must now come in for considerable study. That opens a big field. We know that one gland overdeveloped makes giants, and another gland underdeveloped makes the jockeys that ride race horses. But the time is coming when

just as marvellous things will be discovered as we have accomplished in the last fifty years. We know what we do with radium and the X-ray, and I believe that some method will be found by which you can sterilize the individual, free him of bacteria, and in that case old age will be indefinitely postponed and energy and vitality maintained. I trust that is just around the corner.

You wonder what that has to do with a word of welcome to the doctors. I simply mention these things to get us in the right frame of mind so we can appreciate the kind of men to whom we are extending this welcome. You can now understand how grateful we are and how much pleasure it gives us on this occasion to extend a real hearty welcome to our visitors. (Applause.)

*Response to Addresses of Welcome—Dr. Jas. W. Lipscomb, Columbus, Miss.*

Mr. Chairman, Ladies and Gentlemen:

We have listened with a great deal of pleasure to the kind words of welcome extended us by the citizens of Jackson and the Central Medical Society. Such words are indeed as sweet music to our ears, for as men who labor among the sick and afflicted and whose ears are the receptacle of all gruesome tales of disease and death, we learn to count and to preserve words of gratitude, words of appreciation, and words of welcome, treasuring them up in our memory as the oases of lives thoroughly conversant with sadness.

We note on this occasion the marked and unmistakable air of progress and development in the fair city of Jackson. You are truly taking on a metropolitan aspect, for with your wonderful hotel and your skyscrapers going up on every hand you bid fair to furnish our great state with a long-felt desideratum, namely: a sure-enough city. Unfortunately for our pride, Mississippi is the only state in the Union that can not boast of a sure-enough bona-fide city, but in a few years I am sure that we can point to Jackson as the one which has rubbed that stigma from our fair name.

The medical profession, which I represent here tonight, has suffered more or less since its birth from the humorist. Even before the renowned Gil Blas vented his spleen upon our then defenseless ranks some wag or old-time dandy, lolling in "my ladies' parlor," had given to the world the old story of the man with three sons. The son with great brilliancy of intellect he had made a lawyer, the son of great goodness

he made a preacher, but poor Jim (being a fool) he made a doctor.

Apropos of that may I tell you a true story, one you have never heard, for it happened to me personally. Immediately after my graduation in medicine I settled in the Mississippi Delta, in a little place where there was a railroad station, one store and postoffice combined, and where the plantation owners and managers were wont to gather on Saturday afternoons to discuss affairs in general. There came into that community a long, lean negro school teacher named Atkinson. Being of an altruistic nature I endeavored to help this boy in his scholastic work. I wish you could have seen him—about six feet tall, a veritable Washington Irvin's Ichabod Crane done in ebony. One afternoon when the porch was full who should walk up but Atkinson, whom I had dubbed "Professor." Wishing to notice him I said as he came up the steps: "Professor, where did you teach before you came to Swan Lake?" He replied: "Doctor, I taught for ten consecutive months up here at Belen, Miss." I said, "Professor, you are a leader among your people and should set them a good example. That word is pronounced 'con-sec-u-tive.'" Quick as a flash, in a sharp high-keyed tenor voice he replied: "Thank you, doctor, thank you kindly; I take information from any source. A wise man can learn, even from a fool."

The body of men whom you have so graciously welcomed here tonight is the peer of any like body of men who have ever met within your gates. They are, as you well know, one of the great triumvirate of learned professions—the ministry, the law, and medicine. Professionally speaking, from a genealogical standpoint they go back to sacerdotal times, the first mention of which seems to have been in Arabic literature. St. Luke, the beloved physician, seems to have had first mention, followed by Hypocrates, the author and founder of the code of Medical Ethics, and should you desire to peruse a document of clearness, conciseness, and elegance of diction I urge you to read his great oath, formerly administered to every applicant for graduation and which is as truly a classic as is Lincoln's famous Gettysburg oration. Aesculapius, Galen, Harvey, Jenner, Lister, Pasteur, and Koch are names that stand out like great mountain peaks along the highway of scientific medical progress. The members of this profession have ever been men of education, men of great charity, men of pronounced morality and Chris-

tianity; men thoroughly conversant with the meaning of fellowship and brotherly love—in fact, well rounded, able citizens of the country in which they lived.

Tonight you have with you a body of men who in order to pursue their chosen vocation have been required to receive a high school diploma, to attend two years in college taking a scientific course preparatory to four years in a regular medical college, and if possible this should be followed by a year or more as interne in some hospital. So you see, my friends, the men whom you welcome here tonight represent the regular medical profession and are equipped for the positions they occupy.

If I were asked tonight what one man was the most outstanding figure from a point of economic service to the great state of Mississippi during the past decade I would unhesitatingly, with no equivocation and no mental reservation, name the name of Dr. W. S. Leathers, executive health officer. For fourteen years this man of brilliant intellect, of splendid education, of remarkable executive and administrative ability, of determination and perseverance, and yet with it all an unassuming diplomacy, has stood at the helm and directed to a successful conclusion the Ship of Health. My friends, I fear the citizens of Mississippi do not appreciate to the fullest the work of this splendid man; and as he goes to his larger field of usefulness we will have to say, with Shakespeare, "we shall never look upon his like again."

But it was to one particular feat that I desired to call your attention. When the tocsin of war was sounded and mobilization camps were being established all over the land, Mississippi, as was natural, wanted her share. You know our past reputation as to health. No longer than a week ago I heard Dr. W. W. Crawford of Hattiesburg say, that when the committee of which he was a member called on that grizzled old warrior, General Wood, relative to the location of a camp at Hattiesburg, the General jumped up and striding backwards and forwards said, "I'll be eternally damned before I will establish a camp among the sloughs and bayous and swamps and everglades of Mississippi." When he was shown what Mississippi was doing in a health way he changed his mind; the camp was established, and the records and statistics of that camp show to the world that our state is as healthy as any—the region of the Catskills, the Adirondacks, and the Rockies not excepted. It was the work of Dr. W. S. Leathers that made it possible

for this spectacular refutation of the persistent charge by outsiders that "Mississippi was a cesspool of pestilence and disease."

The medical profession has been accused of parsimoniousness, but in refutation of this charge we have only to point to the most recent great achievement of the profession. You are all acquainted with Insulin, the new treatment for diabetes. Its discoverer, Dr. Banting, a member of the regular medical profession—as have been all medical benefactors—was offered the price of a million dollars if he would sell the patent right. He gave it to his fellow-man.

But, you ask, why this resumé of the regular medical profession? It is done in contradistinction to another body or bodies of men who write the name "Doctor" on the ground glass of their office doors, and who are addressed by their fellow-men as "doctors," but who from a scientific standpoint do not know the *Medulla oblongata* from the *Aurora Borealis*.

While walking down the streets of Roanoke, Va., last month, my attention was attracted by one of those glaring, crass, diagrams of the interior of the human anatomy, reminding me of the never-to-be-forgotten picture of almanac fame which shows to all the "signs of the Zodiac," and which directed one to the offices of Dr. Arthur de Collard, born in London of French ancestry, who was practicing the system of poropathy (opening the pores of the skin by the laying on of hands) and CURING: "Internal cancer, tuberculosis, locomotor ataxia, cerebro spinal meningitis, epilepsy, paralysis, St. Vitus dance, heart trouble, valvular disease and high blood pressure," stating as a final word that "this was the only system able to reach these cases." My friends, if it were not so tragic it would be very ridiculous, but when you think of the trusting, innocent, and uninformed who fall into the hands of these charlatans, whose one and only slogan is "Get the money," and who never to this good day have written in the book of life one single humanitarian achievement, we say it is tragic and far-reaching in its per-

nicious probabilities—as any regular doctor here can tell you.

But what is the crux of the whole matter? It is simply this: the regular medical association who has guarded your welfare through all these years believe that the time has come to require all who in any way attempt the healing art to be qualified to the extent that they will at least do no harm to suffering humanity, and they advise a careful examination at the hands of competent men who are conversant with the branches necessary to qualify in this particular, and ask your co-operation in seeing that such a law is placed on our statute books.

In conclusion, I wish to thank His Honor Mayor Scott, my contemporary Dr. Darrington, and His Excellency Gov. Whitfield, for their cordial words of welcome; and at this time I desire to give public expression to the fact that for fifteen years it has been my distinguished honor and personal pleasure to be the family physician of our present Chief Executive. I have seen him in all moods and tenses of life; I have seen him in adversity and I have seen him in prosperity; I have seen him in the joys of birth and I have seen him in the sorrows of the death of a beloved son. I have seen him hounded almost to desperation by a corrupt political "ring," and I have seen the citizens of the town in which he then lived rise as one man to defend him with their confidence, with their means—yea, with their very life-blood, should it be necessary; and I have seen him come forth victorious, the same calm, sweet-spirited Christian gentleman.

Fellow citizens, I speak as one having authority—I know, I know, I KNOW that your present Chief Executive is clean in his private life, is honorable in his dealings with his fellow-man, is able in his administrative ability—in fact, my friends, he is a MAN in all that the word implies. I am proud to acknowledge Henry L. Whitfield as my Governor, as the Governor of the Mississippi State Medical Association, and as the Governor of all the people of the grand old state of Mississippi.

## DR. HOMER DUPUY, Presiding

*Personal Observations and Deductions in  
the Management of Labor*

Dr. P. L. Thibaut

Twenty years ago 80 per cent of the obstetrical cases in the city of New Orleans were left to the care of mid-wives. Today 50 per cent are attended by physicians. A fuller understanding of the importance of this subject by the laity, and better care in the hands of the physicians have brought this change. There is still much room for improvement.

The progress of civilization, urging young girls to seek the benefits of education, has tendered to develop the mental at the expense of the physical. The ease and luxury that undermine the physical strength of the wealthier classes have found their echo among those less fortunate financially. As a result the delivery of the foetus, at one time a physiological function, except in cases of deformity of mother or child, today requires the assistance of the physician.

Existing conditions require that the obstetrician acquaint himself minutely with the subject, giving close attention to the patient from the very onset of pregnancy. Answering the first call promptly is essential, thereby allaying the nervousness of the patient, and allowing the accoucheur the opportunity of correcting a malposition. The practice of prolonged walking during the first stage of Labor should be condemned, as it can only tend to sap the strength of the patient.

When dilatation is complete the patient is ordered to bed, and anesthesia is started. The anesthetic (chloroform or ether) is administered only during uterine contractions until the foetal head reaches the perineum when surgical anesthesia is resorted to. When Labor does not progress steadily, intervention, governed by the exigencies of the case should be resorted to. Useless delays in the hope that Nature will act may be fraught with danger to the life of the foetus, the mother or both. If forceps are used, the blades should lock easily, as the forcible locking is sure to result in some injury to the foetus. Traction on the forceps should be done rhythmically, imitating normal expulsion. The practice of placing a foot against the edge of the bed or table and pulling with one's full strength should be relegated to the age of barbarism.

The use of high forceps should be condemned.

When forceps cannot be properly applied, or slip after application, podalic version should be resorted to.

In a series of approximately two thousand cases, there were only two cases that, in the author's opinion, should have been delivered by Caesarean Section. In one a live foetus was delivered, in the other a dead foetus. In both cases the mothers were badly torn.

## Conclusions:—

(a) Close attention to the patient during pregnancy, parturition, and the post-partum stage.

(b) The use of some anesthetic in all cases of Labor.

(c) Early intervention in cases not following a normal course.

(d) More frequent use of forceps and podalic version and less Caesarean Sections.

## DISCUSSION

Dr. Nelson: Ethylene is the anesthesia of choice. It is unfortunate that all cases cannot afford it. Pituitin, in selective cases, certainly obviates the use of forceps. I can recall no bad effects from the use of Pituitin. It should, however, be used judiciously; preferably using small doses at 15 minutes intervals.

Dr. Salatich: I have never found the necessity of changing from Chloroform. Have tried few Gas oxygen anesthetics and find that it does not increase pains any more, not necessary especially now that we have pituitin.

For example, case was primipara, having pains. Examined to see whether the head would engage, cervix must be dilated to about size of dollar. By pressing hard and having finger high and letting it come down an inch, it will strike it, that is the sign that the head will engage. Never give more than two mms. of pituitin at that stage. Takes 15 minutes for pituitin to act. At the end of one hour after the cervix is fully dilated, it is safe to give about 3 or 4 mms. Now that the cervix is fully dilated, can start your anesthetic. The head is now on the perineum and the top of the perineum is the hardest part to overcome. Can apply forceps and as soon as overcomes the top of the perineum traction is done easily. I do not approve of caesarean sections. In past year have had several placenta previae and did not do caesarean.

As soon as the head is delivered, I give pituitin and the patient delivers the placenta herself.

Dr. Levy: Judging from the discussions, it seems that there are very few normal cases. No one has said anything about medical mid-wifery. No one had delivered these. When I see a case and it is diagnosed as a normal case, since I have my own anesthetist, gives 3 breaths of Ethylene and tells patient to bear down, gives very little trouble. Have a case now, the perineum was very rigid, slow in dilating. Never examined her once. Went back in afternoon and let her alone.

Case went along nicely and gave no trouble.

Have seen pituitin act in 3 minutes in Caesarean sections. If you give pituitin, as soon as you start the uterus will contract in your hand before you put your sutures in. Never give pituitin until the cervix is fully dilated. Saw one case that had pituitin and uterus ruptured. There are times when we do have to do Caesarean. I have had one in the past three weeks. Placenta Previae was gushing blood.

I believe in more frequent examinations. If you give your patient one examination, and do not watch her you do not know whether your patient is normal or not. Have used pituitin over 300 times, never have used it until dilatation was complete or nearly so.

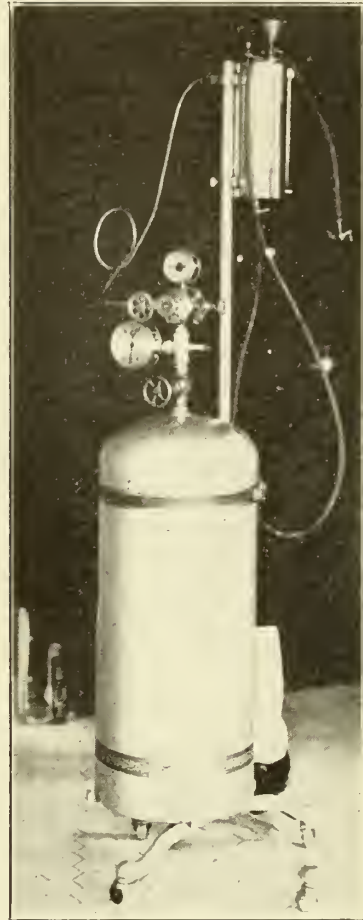
#### *Description of "Louis Levy Infiltration Apparatus" For Use in Local Anesthesia*

Dr. Levy: It occurred to me that the syringe method and the ordinary hand pressure method for infiltration of tissues with a local anesthetic could be improved upon. Working on these lines and in looking about for some method to do away with the cumbersome syringe and hand pressure apparatus, and knowing the trueness of air pressure, I have devised the apparatus which I will now describe.

It consists of a stand onto which is attached an air tank capable of 100 pounds pressure. This tank has a gauge showing the amount of pressure. There is a pressure regulator attached to a metal tube that leads from the large tank to the smaller tank containing the solution of local anesthetic to be used. We know that it requires between 20 and 30 pounds pressure to press down and empty a syringe. I figured it would be less traumatic to have the fluid flow into the tissues at an even rate and find that 30 pounds is about the pressure required, hence, the pressure regulator is kept at 30 pounds. This can be increased or lessened at the pleasure of the operator. The smaller receptacle consists of a tank which is clamped to the stand, and a tube which conveys the regulated air from the larger tank to the smaller tank. It also has on the top of it a funnel for filling and an air exhaust. On the front of this tank is a gauge which shows the amount of solution the tank contains. At the bottom of this tank is an outlet to which the tube is attached, capable of withstanding the pressure of over 60 pounds. The end of this tube contains an ordinary air cock, the end of which has been turned at right angles giving the proper angle for needle attachment and leverage for insertion of needle.

The tank for solution of local anesthetic

can be readily detached from the stand and put in the sterilizer. The tubing can also be detached and put in the sterilizer. Three pieces of tubing are made with each apparatus so that the tank can be sterilized once a day and the tubing readily changed for the different cases. The air in the large tank is ordinary atmospheric air under pressure which can be obtained by the use of any hand pump or at any filling station. To be sure that this air will not contaminate the solution, cultures of the anesthetic have been made after the tank for the local anesthetic solution was boiled.



Levy Infiltration Apparatus for use in local anesthesia

Cultures of the anesthetic were made after ordinary alcohol sterilization on the second day. Both cultures were negative after three days. (By Dr. Couret.)

I would advise boiling the small tank at least twice a week and washing it out with alcohol every day that it is in use. The tubing and needles should be sterilized after each case.

I have used this apparatus and find that with this process, your needle literally



writes your solution evenly and expeditiously.

The advantages of this process are:

1. It does away with syringes.
2. Solution flows at an even rate.
3. The amount of solution is accurately measured.
4. The short time it takes to infiltrate.
5. It is on hand at all times.
6. The sterile tubing allows you to go from one case to another with the sterile instrument without boiling the tank the second time.
7. The simplicity of the apparatus.

This apparatus has been in use for the past month by members of the Hotel Dieu Staff.

been deprived of a reasonable education.

### MEDICAL ECONOMICS

This new department has been inaugurated to facilitate a frank and free discussion of the practical problems associated with medical practice, especially those which deal with more and better service to the public, the honest, efficient transaction of our business dealings, our duty to ourselves, and to those who are dependent on us.

We believe that organized medicine can, in a practical way, be of greater help to the profession, and we are taking this means of encouraging the big medical family to join hands in a co-operative movement which will make us better doctors by understanding and employing to a greater degree, the economic laws on which all honest professional and business transactions largely depend.

We believe that the best place to discuss and offer helpful suggestions about this natural and important phase of our development is within the regular medical family and that the best way is the clean frank way; just as the best place for our children to receive the necessary and important knowledge about sex is in our families, rather than in the back alleys where the subject is usually not presented in a clean helpful manner.

The doctor whose finances are in a chaotic condition and who is often living beyond his means, cannot from a medical standpoint give his patients the best there is in him, because of necessity, his energies must be more or less devoted in trying to dodge or juggle his obligations.

How often have we read of a colleague's death and sometime later learned that his wife had taken some humble position to earn a livelihood, or that his children had

If most of us had been endowed with much business acumen, we would probably never have studied medicine, which makes

How often do we meet a physician whose very life's blood has been given in the practice of his profession and who, in his later and less productive years, is almost in actual want. Just a little practical knowledge, some real interest in his future, and possibly a slight bit of assistance, some years earlier would have usually prevented these tragedies. There is no reason why honest effort in medical practice should not be rewarded, later by the comforts of life in our less productive years, and by sufficiency of this world's goods, to educate our children and provide for those who are dependent upon us; if only we will devote a small amount of time and thought to this interesting and important part of our life's work.

it all the more necessary that we pool our knowledge and experience. In a short time we can gather data which will be of the greatest practical value. It is not to our credit that we compose a large quota of the suckers on whom fake investment and speculation promoters thrive.

Perhaps you contemplate changing or enlarging your office, or employing an assistant, or joining a group, or perhaps your record system is not satisfactory, or your net income is disproportionately small, or perhaps you would like to know where reliable information can be obtained concerning some stock, bond, or other investment which has been offered you. Write us about these or any other economic problems that interest you and let us try to help you solve them. If desired, your confidence will of course, be respected.

If you have any suggestions or criticism concerning this department, or any ideas that you think will benefit the medical profession, we welcome them. We want you to feel that this is your journal, and especially that this is your page, conducted to help you as you want to be helped.

Our present plan is to alternate your questions and our answers with short articles on such subjects as "Where Does The Doctor's Money Go," "How Much Should A Doctor Save," "How Should A Doctor Invest His Savings," "Suppose You Were To Die Tomorrow," "Medical Expense," "The Fundamentals Of Group Practice," "How Can A Doctor Increase His Income," "What Will You Be At Sixty"; and other subjects which may interest you.

We want you to write and tell us what you think of the idea and how we can help you.

Address communications to Dr. Chas. A. Bahn, Orleans Parish Medical Society, 1551 Canal St., New Orleans.

## NEWS AND COMMENT

### *Orleans Parish Medical Society*

Two meetings, a Clinical and a Scientific Meeting were scheduled for the past month. The Clinical Meeting at the Charity Hospital was very well attended and the papers were very interesting and generally discussed. The Scientific Meeting was adjourned by the President for lack of a quorum, the reason being that the meeting conflicted with an emergency meeting of the Charity Hospital Staff.

The Legislative Committee appeared before the Senate Committee on Health and Quarantine at the Capitol and strongly urged the passage of the original Charity Hospital Abuse Bill. A favorable report was returned on the substituted bill offered by the Charity Hospital visiting staff. The Chiropractic Bill hearing was attended by our Legislative Committee, and it received an unfavorable report in the House Committee.

Dr. Robert L. Gordon was elected to active membership.

During the summer months the meetings of the Society will be suspended to be resumed the 4th Monday in September.

Members who have not paid their second quarter dues by July 1st have been declared delinquent. Members are requested to pay their third quarter dues which are now due, as soon as possible. They will facilitate the office work, especially while Miss Maier and Miss Marshall are on their vacations.

### *Report of Librarian for Month of June*

During the month the work of listing the Journals of the Tulane storeroom has been completed, netting our own collection many numbers which have filled gaps in our files. The listing of the books is now in progress and we hope to find many titles among these to add to our own library.

About sixty volumes of journals have

been prepared for the bindery, and will be sent to our bindery during the week.

97 volumes have been added to the library and cataloged. All of these were received from the duplicate collection of Tulane.

### *Report of Treasurer for Month of June*

Total Receipts .....	\$ 386.00
Total Expenditures .....	445.00

### RESOURCES

Domicile fund, Liberty	
Bonds, par value .....	30,000.00
Library Endowment	
Fund, Bonds, par value .....	3,500.00
Medical Relief Fund	
savings account .....	96.23
	\$33,596.23

### *Bulletin of the Shreveport Medical Society*

*July Scientific Program by Tri-State Clinic.*

*August Social Meeting, No Scientific Program*

*July Subject: The Female Pelvis*

Surgery of the Tubes and Ovaries,—Dr. L. H. Pirkle.

Caesarean Section,—Dr. T. E. Williams.  
Female Pelvis from a Urological Standpoint,—Dr. E. W. Harris.

Extra-Pelvis Symptoms due to Pelvis Pathology,—Dr. H. L. Green.

Toxemias of Pregnancy,—Dr. W. B. Heidorn.

Ectopic Gestation,—Dr. S. W. Boyce.

The above papers will be limited to ten minutes with discussion limited to five minutes.

*Charity Hospital June 3, 1924**Scientific Program*

This part of the program was put on by the Ouachita Parish Medical Society.

Dr. J. B. Vaughn talked about Hypertension. Discussion by Drs. Herold, Knighton, Lloyd, Bodenheimer, Boaz, R. C. Young, Sanderson and closed by Dr. Vaughn.

Dr. Geo. Wright talked about Acute Hematogenous Osteomyelitis. Discussion closed by Dr. Wright.

These subjects were interesting and well presented and called forth lively discussion. After a business session the Society was adjourned. Refreshments to follow.

Robt. T. Lucas, Secty.-Treas.

*Meeting of St. Tammany Parish Medical Society*

The St. Tammany Parish Medical Society held its regular monthly meeting on Friday, June 13th, at Mandeville.

The meeting resulted in a round-table talk with the following results:

Interesting discussion of the Eruptive Fevers, led by Dr. J. F. Buquoi; condemnation of some of the present-day methods of the Louisiana State Board of Health; memorializing Governor Fuqua to keep politics out of the state medical institutions, with special reference to the state institutions for mental diseases, and strongly recommending and endorsing Dr. Evans, the by Drs. Spencer, Caldwell, Abramson and present very efficient medical superintendent, for retention or reappointment; opposition to the "Chiropractic" bill now before the Legislature, as vicious and a menace to an unsuspecting and gullible public, and petitioning our State Senator and Representative to work and vote against it.

*Tangipahoa Parish Medical Society*

The Meeting of the Tangipahoa Medical Society was held at the home of Dr. E. M. Robards, Monday night with 23 Doctors present.

The large spacious porch of the Doctor's residence was used for the business meeting, which was addressed by Dr. Geln Smith of Amite, and Dr. A. W. Shaw of the United States Malaria Control Department.

At the conclusion of the business meeting, the visiting medical men were ushered into the large dining room of Dr. Robard's residence, where a dinner was served.

Dr. Beverly Smith of Franklin has been quite ill with facial erysipelas, but he is now convalescing and is considered out of danger.

Faulty lighting and poor eyesight "are today the major factors in one out of every eight accidents," it is asserted by R. E. Simpson, engineer of the Travelers Insurance Company, Hartford, Conn., in a report to the Eye Sight Conservation Council of America, which is carrying on a nationwide campaign for better vision in education and industry. Fully 66 per cent of American workers have defects of vision, according to the report.

*Washington Parish Medical Society*

June 26th, 1924 the Washington Parish Medical Society held its regular monthly session at the Pine Tree Inn, Bogalusa, La.

Luncheon was served at 8:00 P. M., and after luncheon the regular program was taken up.

*Program*

"Ileo Colitis"—Dr. Chas. J. Bloom, New Orleans.

After the reading of this paper there was an "hour of questioning" round table discussion.

*Postabortal Hemolytic Streptococcemia*

"The occurrence of 4 cases of abortion complicated by hemolytic streptococcemia with recovery under the use of Antistreptococci Serum on the gynecologic service of the Presbyterian Hospital of Philadelphia during the past year, seemed of sufficient interest to warrant reporting them.

Dr. J. S. Couvillon, Councilor of the Eighth Congressional District of the Louisiana State Medical Society, has been elected Mayor of Moreauville.

The Sheppard-Towner Bill has become a law.

It is to be regretted that the differences existing between the Louisiana State Board of Health and the Board of Health of the City of New Orleans could not be adjusted quietly and without being aired in the Legislature or in the Press. Such controversies create in the minds of the public unfavorable impressions which do not benefit the Medical Profession at large.

The value of the effectiveness of a law recently passed requiring male applicants for a Marriage License to produce a certificate from a physician showing that he has been examined during the past 15 days and has been free from communicable diseases will be watched with interest. The law fixes the physician's charge at \$2.00 for the examination.

Drs. Herold, Dickson, and Sentell will move their offices Monday, July 28th, 1924 to the New North Louisiana Sanitarium, 1130 Louisiana Avenue, Shreveport, Louisiana.

In June, at the suggestion of the Ouachita Parish Medical Society, there was an interchange of program between that organization and the Shreveport Medical Society. Drs. Vaughn and Geo. Wright went to Shreveport and Drs. Abramson, Sander-son and Gowan made the trip to Monroe. The idea proved to be a very practical one and the essays presented were highly instructive and appreciated.

The new staff of the Shreveport Charity Hospital has arrived and been installed as of July 1st., under the superintendency of Dr. W. P. Morrill. Dr. Lambert, of last year's staff, is now chief surgical resident

and Dr. Norphleet of Virginia is the new chief medical resident; Dr. McBride, formerly of Tulane, is assistant to Dr. Lambert and there is a full quota of internes.

Dr. W. M. Jackson was recently injured in an automobile wreck and is now under treatment at Shreveport.

Dr. J. L. Pittman, until recently practicing medicine at Cedar Grove, La., was found guilty by Federal Judge Dawkins, at Shreveport, of violating the Harrison act; penalty imposed was 90 day jail sentence and a fine.

The Shreveport Medical Society will hold its annual social session on Aug. 5th.

At the recent commencement exercises of Loyola University the honorary degree of L. L. D. was conferred on Dr. J. T. Nix, New Orleans.

Under the sponsorship of the Illinois State Medical Society there is in preparation "A History of Medical Practice in the State of Illinois" that must go to the printer at an early date. In order that this volume may be accurate and complete, all possible assistance is asked from every source, as to personal data and experiences, including diaries, photographs and similar documentary mementoes of pioneer Illinois doctors and of progressive phases of medical practice, as well as of achievements in fields other than those of medical science. Prompt return in good condition is promised for anything loaned the committee, the personnel of which is:

O. B. Will, M. D., Peoria, Ill; C. B. Johnson, M. D., Champaign, Ill; Carl E. Black, M. D., Jacksonville, Ill; George A. Dicus, M. D., Streator, Ill; James H. Hutton, M. D., Chicago, Ill; Chas. J. Whalen, M. D., Chicago, Ill.,—Chairman.

#### PUBLICATIONS RECEIVED.

The Macmillan Company, New York: "The Internal Secretions," by Dr. Arthur Weil. "Anesthesia," by James Tayloe Gwathmey, M. D. "Goiter: Nonsurgical

*Types and Treatment*," by Israel Bram, M. D.

Lea & Febiger, Philadelphia and New York; "*Diabetic Manuel*," by Elliott P. Joslin, M. D. "*Hygiene and Public Health*," by George M. Price, M. D.

C. V. Mosby Company, St. Louis: "*Life Insurance Examination*," edited by Frank W. Foxworthy, Ph. B., M. D. "*Modern Methods of Treatment*," by Logan Clendenning, M. D.

Funk & Wagnalls Company, New York and London: "*Eat Your Way to Health*," by Robert Hugh Rose, A. B., M. D.

J. B. Lippincott Company, Philadelphia and London: "*International Clinic, Vol. 11, Thirty-Forth Series, 1924*."

Paul B. Hoeber, Inc., New York: "*Clinical Aspects of the Electrocardiogram*," by Harold E. B. Pardee, M. D.

Washington Government Printing Office: *Mortality Statistics, 1921, Twenty-Second Annual Report*.

## REPRINTS.

"*The Force Behind the Law*," by J. H. Beal. "*Controlled Diaphragmatic Breathing in the Treatment of Pulmonary Tuberculosis*," by S. Adolphus Knopf, M. D.

## BOOK REVIEWS

Habitual Constipation: Its Causes, Consequences, Prevention, and Rational Treatment. By Ismar Boas, M. D., Translated By Thomas L. Stedman, M. D. Funk & Wagnalls Company. New York And London, 1923.

This book is intended to be used as a guide for patients who are under the care of regular physicians for the treatment of constipation. The author emphasizes the value of regulating the bowel function by proper dietary measures, gives very good diet lists, and warns of the dangers of the abuse of purgatives. There are chapters on mineral water cures, country life, electrical treatment, abdominal massage, exercise, hydrotherapy and such other measures as are usually included in a book on this subject. The style is plain and should help intelligent patients understand their condition. The book could be shortened to great advantage. It has no index.

Maurice Lescale, M. D.

Practical Electrotherapeutics and Diathermy: By G. Betton Massey, M. D., The MacMillan Company, New York, N. Y.

Chapters 1 and 2 dealing with the fundamentals of electricity and the section devoted to Galvanic current are excellent. The chapters on Diathermy and the High Frequency currents are not up to date methods of applications and should not be accepted as such. Electrotherapy has its place in medicine but it is not a panacea. Works of this type leading one to believe that all conditions are amendable to some form of electricity tend to hold back a valuable adjunct to medicine and surgery.

C. L. PEACOCK.

Intra-Nasal Surgery, By John A. Pratt, M. D., and Fred J. Pratt, M. D., Minneapolis, -Pub. F. A Davis Co., Philadelphia, 1924.

Why another monograph on a subject covered by every text-book on the Ear, Nose and Throat? The original drawings from actual specimens, minute descriptions of the most generally accepted operations, the concentrated attention to the complex Ethmoid region, are ample reason for such a contribution. While the volume abounds with many excellent features one chapter alone must command our interest. It is of supreme importance that a note of warning is sounded, for the first time relative to possible injury of healthy teeth as a sequel to radical, and perhaps badly performed, surgery of the Maxillary Sinus. Are we sufficiently impressed with the anatomical fact, which shows how the superior alveolar nerve, with its accompanying blood supply give vitality to the upper incisor and canine teeth? In the Caldwell-Luc or Denker operations, a large section of this nerve is exposed to operative injury, Dental symptoms, numbness and seeming elongations of the teeth, with even dental devitalization and apical abscess, may be the end-result of radical maxillary sinus surgery.

Moral: The fool-hardy must not step in where even angels should fear to tread.

HOMER DUPUY.

Applied Pathology in Diseases of the Ear, Nose and Throat, By Joseph Beck, M. D., Chicago, Pub. by C. V. Mosley Co., St. Louis. 1923.

This contribution from the pen of the ingenious and fertile-minded Joe Beck represents the personal experiences of that indefatigable worker. It is this very personal touch which gives the splendidly illustrated volume its real intrinsic value. It certainly is not to be classed with the "common garden" variety of text-books. It has an individuality all its own. The author's literary expression is so terse and epigrammatic that

"multum in parvo" is incorporated within the pages of this unpretentious-looking volume. But, read into it, and one will find personal observations, advice, and suggestions, which must prove precious as refined gold to the seeker of knowledge.

How consoling to the perfect technician to have such an authority emphasize that tissue found in the tonsillar fossa after a well-performed tonsillectomy is usually granulation tissue. The lingual tonsil may become compensatorily hypertrophied and may extend its lymphoid tissue developments in the tonsillar fossa region. And yet he differentiates such a sequence from tonsil remains due to imperfect surgery.

Can we not with profit heed the advice that in fulminating frontal sinusitis it is safer to do external surgery? Again there is wisdom in the statement that it is well-nigh disastrous to inflate the middle ear during an acute infection. Worthy of thought is the opinion that marginal perforation of the ear-drum is associated with necrosis, and may call for surgical interference. Of practical import is the assurance that in any type of acute meningitis, with arachnoid irritation, the spinal fluid will show cytological changes, even though the fluid appear normal in color and pressure. We could indefinitely quote words of wisdom from a work which fills a long felt need. It unmistakably carries out the definite idea of first understanding the underlying pathology before instituting a reasonably hopeful line of treatment. The microphotographs, while not retouched, are illuminating. As this unique contribution is dedicated to the future of Oto-Laryngology, the vanguard, as well as the rank and file, of the specialty can gather inspiration and promise for better work by a study of Beck's "Applied Pathology."

HOMER DUPUY.

The Pharmacists' Botany: by Geo. B. Rigg, Ph. D., Associate Professor of Botany, University of Washington. Cloth. MacMillan Co., New York. 1924.

The title of the work is suggestive, and we gather from the author's preface that his aim has been to present not only those phases of Botany that are of specific interest to the pharmacist, but also to give a general view of the subject which will serve as a background for him in his professional work. The importance of Botany to the student of Pharmacy is indicated by the fact that approximately three hundred official drugs are derived from plants. The author has classified his subjects well and presented them in a most interesting manner. One feature that is especially commendable and consistent with the author's aim is the separation into groups of the official and unofficial drugs. Another is that section of the book devoted to cultivation of drug plants both experimentally and on a commercial basis. The book is replete with clean-cut illustrations, many of which are photographic in type. The reviewer was a bit disappointed to note that little or no reference is made to the subject of Pharmacognosy or the microscopic examination of powdered drugs for the purpose of identification.

GEO. S. BROWN

The Diseases of the Breast, by Willmott H. Evans, M. D., F. R. C. S. London, 1923. University of London Press.

This is a very readable book. It gives a comprehensive discussion of the anatomy and diseases of the breast. The illustrations are not numerous but excellent. The author adopts the parasitic theory as the best explanation of neoplastic growths. He admits the parasite has not been discovered, but insists that the origin, method of growth and behavior in general of cancerous tumors indicate their parasitic origin. The spontaneous cure of many such growths is thus easily explained, he believes. With the death of the parasite the irritation ceases and the cancer cells no longer proliferate. The book has our hearty commendation.

F. W. PARHAM.

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# NEW ORLEANS MEDICAL AND SURGICAL JOURNAL

Owned and Published by THE LOUISIANA STATE MEDICAL SOCIETY  
OFFICIAL ORGAN MISSISSIPPI STATE MEDICAL ASSOCIATION AND ORLEANS PARISH MEDICAL SOCIETY

\$2.00 per Annum, 25c per Copy  
Volume 77, Number 3

SEPTEMBER, 1924

Published Monthly in New Orleans  
at 1551 Canal Street

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Next Annual Meeting Louisiana State Medical Society, New Orleans, April 21-23, 1925  
Next Annual Meeting Mississippi State Medical Association, Biloxi, May 12-14, 1925  
Next Annual Meeting Southern Medical Association, New Orleans, Nov. 24-27, 1924

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# Surgical Journal

Vol. 77

SEPTEMBER, 1924

No. 3

## THE PHYSICIAN'S RESPONSIBILITY TO THE PATIENT IN A DIAGNOSTIC WAY.\*

E. L. EGGLESTON, M. D.,  
BATTLE CREEK, MICH.

During the past few years we have witnessed some decided innovations in the practice of medicine. Less than a decade ago, the family doctor who announced himself as physician and surgeon, was, in a great many families, the only medical authority consulted from birth to the final dropping of the curtain, and then only in case of absolute necessity. It is possible that the medical practitioner of forty or fifty years ago would today be considered very poorly prepared for the practice of medicine. His preliminary education and undergraduate training would not admit him to examination before a single state examining board today. His text books are long since obsolete. Laboratories, if they existed at all, were very crude in the great majority of schools and with medical practice lacking practically all the refinements which today we feel are absolutely essential to accurate diagnosis, we marvel at the success apparently attending his efforts. Is it not possible that he may have developed almost of necessity, because of his close association with his patients, a certain clinical sense, which in these days when the physician has at his hand so many diagnostic aids, may be largely lacking—at any rate the record of the profession during those days is one which we can look to with pride. He was the pioneer of scientific medicine and I am sure improved his opportunities for advancement equally as well as do we of today. His life was one of hardships; he was constantly on call day and night. The automobile and good roads were not yet known and much of his time was spent traveling from patient to patient, and

his mode of conveyance was not usually a comfortable one, in decided contrast with the comfortable means of conveyance provided for the physician of today if he be willing to render service outside the hospital or his office. His opportunities for educating his clientele were limited as his time was fully occupied with the sick, though no doubt he made such suggestions as circumstances would permit in the way of improvement in health conditions in the families under his care, but that he considered this as incidental is evidenced by his refusing to render a bill unless the patient received some medicine or at least a prescription.

Gradually the idea that the family physician was not able to cover the entire field of medicine began to impress the profession. Men began to limit their practice to general medicine or surgery. Others limited their work to the eye, ear, nose and throat, others to obstetrics, and recently the number specializing in some definite field of medicine has increased very rapidly. The result has been that the old type of family physician, except in the more sparsely settled sections of the country, has become almost extinct. Along with the specialization and restriction of medical effort to more specific lines has come the tendency to centralization—several men working along different lines locating their offices in the same building in order to have ready access to each other's offices. Others have gone farther and associated themselves together financially in one group or clinic with the same idea, that in so doing they would be in better condition to render satisfactory service to the patient. In other words, they appreciated that no one man is able today to render efficient service in all lines of medicine, and that if the patient is to be properly studied, it must be frequently at the hands of several men working along different lines. The internist may announce that he is limiting his work to diagnosis, but no competent internist

\*Read before the Mississippi State Medical Association, Jackson, May, 13-14, 1924.

would be willing to discard the help of the eye specialist in certain cases; in others he needs the dental surgeon; very frequently he needs the Roentgenologist, in other cases the surgeon, or the orthopedist, and many others might be mentioned, all of which goes to show the rapid evolution of medical diagnosis during the past few years.

Coincident with this decided advance in the profession, the laity has been awakening to the value of health as an asset. Formerly, their physician was consulted only when they were ill. The idea of a thorough physical inventory is comparatively recent, and has resulted largely from the education obtained from the lay press, popular lectures, etc. The great percentage of unfitness discovered in the examination of our young men during the late war awakened many. "About four million male persons between the ages of 18 and 42 were examined. The resulting figures of defects serve as an index to the condition of the whole country, bearing in mind that they apply only to men in the prime of life. Of 3,764,000 in the first and second draft, 555,000 were rejected as entirely unfit for service. Of about two million seven hundred thousand called to service, 47 per cent had physical impairments, a figure which Dr. E. L. Fisk believes is much too low."

Further, the nutritional workers, going into our schools find from 50 to 80 per cent of our children below par physically. And the children from the homes of wealth are as bad off as those from the tenements! Let me also call your attention to the results of the observations of one of our large life insurance companies who since 1911 has been carrying on a campaign in an endeavor to lengthen the life of its policyholders. They report their results with a class of individuals who live "under an industrial strain and economic pressure likely to render its members more susceptible to disease. To spread health knowledge among its policyholders this company has prepared and distributed booklets and pamphlets giving instruction in hygiene, suggestions for the care of children and advice for the prevention of disease. The total distribution to January 1, 1924, was 306,000,000 pieces of literature." A visiting nurse service was provided, covering more than 4,000 cities and towns and providing for the care of their policyholders when ill. To December 1, 1923, a total of 18,932,224 visits had been made. This program was supplemented by the company's local health exhibits, "clean-up," safety, pure milk and other health campaigns, and

the making of health and sanitary surveys. They report that "measured in terms of lives, the improvement in industrial mortality in 1923 over 1911 means a saving of 52,600 lives; measured in terms of dollars and cents, it means a saving of \$12,680,000 in death claims in 1923 alone."

In comparing the figures of 1911 with those of 1923, it was found that there were 52,600 fewer deaths for all causes in 1923, 16,600 fewer deaths from tuberculosis, the death rate falling twice as fast in industrial department as in the United States Registration Area, 3,600 fewer deaths from influenza and pneumonia, 1,900 fewer deaths from heart diseases, 2,700 fewer deaths from chronic nephritis, and 2,600 fewer deaths from typhoid. The increase noted in the death rate was from automobile accidents and cancer.

A careful survey of the records of 5,987 persons examined during the first two years has been made and some remarkable facts brought out. Whereas in five years 412 of these persons should have died according to the American Experience Table, actually only 217 died. In other words, the death rate of this selected group of nearly six thousand persons who thought enough of their physical welfare to have a health examination was only 53 per cent of the American Experience Table and 72 per cent of the American Men Table. In one year those examined showed a mortality of only 39 per cent of the American Experience Table, while ordinary policyholders showed a rate of 70 per cent. The company estimates that on this venture it returned the money invested in the examinations (which were free to policyholders) and made a profit of 200 per cent in five years. Another fact brought out was that unless the examinations were regularly repeated, the beneficial effect wore off in about five years."

As a profession we have been reticent in educating the public as to the advantage of careful medical investigation at frequent intervals. We are not free from criticism when members of families which have looked to us as the medical advisor, lose their lives, 5, 10, 15 or 25 years earlier than was necessary if they had been carefully studied and such advice given at the proper time as would have prevented their too early demise. How many business men develop Arteriosclerosis and Arterial Hypertension with a resultant apoplexy, which might have been avoided had the individual been under observation regularly for some years previous and had been prop-

erly educated in matters of health. The same might be said with reference to a large number of troubles of organic character that are the chief causes of death after 45. In practically all of these troubles, with careful medical supervision and the patient educated as to his physical limitations, his life might have been prolonged many years.

This it seems is the situation which our profession faces. In many ways the laity is being educated as to the advantage of such a regime. We must now inquire if we are prepared to assume our responsibility. I mentioned earlier the formation of medical groups or clinics which it seems is a necessity if we are to meet our responsibility to the public. It is not my purpose to advocate group practice with a common financial arrangement. This may or may not be advantageous, but I would advise the association of men of different specialties locating themselves in a convenient way in order that the patient may be referred to without great inconvenience as his case may demand. There must be freedom from personal jealousies and such professional confidence as will permit the patient to receive the greatest possible good.

The expense to the patient of such an arrangement should be determined by the amount of service rendered and his ability to pay. With very few exceptions the members of our professions are always underpaid. The laity must be educated as to the value of health as an asset in life. A man that would gladly spend \$500 in having his car overhauled would feel that he was being robbed if he paid \$50 for an examination which might mean many years of life or the absence of suffering, which could not be properly measured in a financial way. We are to blame for not educating our clientele somewhat as to the value of our service. Too frequently we criticise a fellow practitioner who has received a seeming large fee without first knowing how much time he has devoted to the case or what it may mean to the patient. There is no profession where the members have to spend so many years and with such a financial outlay, as the medical profession, and probably of all the professions we are the most poorly paid. Let us have more interest in the welfare of the profession as a whole and in so doing we will be relieved of petty jealousies and will establish ourselves much higher in the public esteem.

#### DISCUSSION

Dr. G. Y. Gillespie, Jr. (Greenwood): I feel sure that I express the sentiments of every mem-

ber of this association when I say that Dr. Eggleston's paper was interesting and enjoyable. He has sounded the keynote of the medical man's idea of the Utopia of medicine when he places the responsibility for an accurate diagnosis upon the shoulders of the physician. In discussing this paper I can only praise it and concur in what the doctor has said and demonstrated to us.

Man was born to die. Sickness and death have always been with him, so he has a preconceived fatalistic viewpoint that has aided the sorcerer in the past and helps the charlatan and quack today. The science of medicine through investigation and study has built up piece by piece through the ages a definite structure of fact. We know that to be true. The oldest profession in the world is that of sorcerer, or man of magic, that specialized in the protection of his fellowman from the terrors of the unknown. We know that medicine is now progressing by leaps and bounds. The doctor has always been the teacher as well as the healer, and today his duties as teacher are manifold because in the hearts and minds and lives of men disease is being recognized as a series of phenomena subject to natural and discoverable laws to be dealt with by the practitioners of medicine.

Medicine has made wonderful progress; it has undergone an evolution and is progressing toward an exact science. The human body is the masterpiece of creation, it is perfect in its normal functions; but we must recognize the fact that it is subject to pathological and abnormal changes due to environment and circumstances. Since that is true it has been the aim and goal of the man of medicine to recognize and point out to the individual these abnormal and pathological changes, and this, my friends, is the basis and foundation of diagnosis. This is the reason the physician is responsible to the patient for accurate diagnosis of his condition.

Research and study have revealed the intricacies and complexities of the normal and abnormal functionings of the human mechanism to such an extent that the practitioner of medicine today is unable to cope with the progress that is being made and to thoroughly understand all of these things, and it is out of this, that specialism has, of necessity, been born. The specialist has refined methods of diagnosis that enables him to point out to the attending physician definite reasons why the human body is abnormal in its functioning, and the general practitioner that recognizes the specialists' refined methods of diagnosis is not to be condemned, but should be praised. It is to his credit that he will send his patient to a specialist for definite diagnosis of abnormal conditions.

In medicine I am an optimist. I believe that the medical man has almost solved the problem of health, and I feel that the time is not far distant when medical men, grouping themselves together, will be able to tell a man when he is normal and when he is abnormal.

Dr. P. W. Rowland (Oxford): I want to express my very great pleasure, as a member of this association, and personally, in the presence of Dr. Eggleston, especially, because for ten consecutive years I was a patient of his, and I do not think he ever found anything wrong with me. If he ever made a diagnosis I do not know just now what it was. I know, however, that he said there was no diagnosis to be made, and that is just about as good a diagnosis as one could wish. I am also peculiarly pleased because my asso-

ciation with Dr. Eggleston during these ten years has been one of the delights of my life. He is not only a splendid diagnostician in the usual sense, using laboratory tests and refinements, but he has a sixth sense in diagnosis. He has it in a pronounced degree. I do not know how to express it except in this way—a psychological insight into the reaction of a patient to given stimuli. That is rather indefinite—I hope you understand what I mean. Perhaps I can best illustrate it in this way: If I were a professor of medicine in an institution in this day and time I should take my students to the wards of a hospital and I should say to them, "Here are sick people, men and women. I do not care anything about the particular diagnosis you make now. Here is a sick person, and I want you to spend five minutes in conversation with this sick person. It does not make any difference what you talk to him about, but draw him out and find out how he reacts to your questions, to the stimulus you put to him, and then I want you to tell me your conclusions as to the reactions of that individual patient." I say if I were teaching young men in medicine today I should adopt that as a regular routine, without any reference to treatment, without any reference to the X-ray or the laboratory—I am not decrying these things, but I am emphasizing the psychological points in which Dr. Eggleston is trained in the highest degree, and which, without question, will frequently lead us to a diagnosis that otherwise we are unable to make—an acute insight into the character of a man's reaction in the presence of disease and abnormality—how one patient will react in one way, and another patient in another way.

I am sorry we have not longer to discuss this question, but I want again to express my great appreciation of Dr. Eggleston's presence and of his paper.

Dr. Seale Harris (Birmingham, Ala.): Regarding the various points in diagnosis which Dr. Eggleston brought out; I think the most important and essential thing in every case is to make a thorough examination of the patient and an accurate diagnosis, and this cannot be done in a few minutes. The patient must be studied over a period of several days. One of the most important things in diagnosis, in my judgment, is the history of the patient. I think 75 per cent of cases of duodenal ulcer can be diagnosed without the X-ray. Do not misunderstand me—I think the X-ray should be used where it is possible. Another thing in the diagnosis of duodenal ulcer, if the patient is put to bed and placed on a modified Lenhart diet, the symptoms will subside. The doctor brought out the point that frequently appendicitis is diagnosed as duodenal ulcer. We went over our cases of gastric and duodenal ulcers some years ago and found that according to the history more than 40 per cent had had their appendices removed, some with temporary relief and some with no relief at all. The fact of the matter was these people had ulcer all the time. On the contrary, last week at the meeting of the American Gastroenterological Association there was a paper read showing that a chronic appendix often stimulates an ulcer, and Dr. Heyd of New York mentioned a number of cases. We have had several cases where we felt the diagnosis was probably duodenal ulcer, and when an X-ray was made it showed adhesions around the caecum and on operation a chronic appendix was found.

One thing I would like to call to the attention of the surgeon, and that is in the case of a patient with a chronic abdominal condition in

operating it is advisable to make an incision long enough not only to examine the appendix, but also the gall bladder and duodenum. It will not infrequently be found that a patient has appendicitis and also a duodenal ulcer. At this meeting of which I have spoken there was a paper read showing the relationship of appendicitis to duodenal ulcer and gall bladder infections and showing how the infection may be carried not only through the blood stream, but by the lymphatics, and that not infrequently we find chronic appendicitis with ulcer and gall bladder disease in the same patients.

It is important to take everything into consideration—not stop merely at diagnosis, but teach the patient how to live to keep up his resistance. In ulcer cases look out for focal infections, study the patient carefully and have him report back every month for a year for further observation and advice.

Dr. E. L. Eggleston (Battle Creek): I appreciate the kind discussion of this paper very much.

I did not intend to say there is no such thing as chronic appendicitis. Forty per cent of Dr. Harris' cases of duodenal ulcer had been diagnosed chronic appendicitis and operated without relief. That is exactly what I wanted to convey to you, that the possibility of error is very great when we make a diagnosis of chronic appendicitis in vague abdominal disorders. And I would say further if you are the internist on a case and it goes to a surgeon, for chronic appendicitis, do not allow him to make an incision an inch and a half long, but insist that he make an incision long enough to explore thoroughly the right upper quadrant when he takes out what he thinks is a chronic diseased appendix.

## THE MANAGEMENT OF THE THIRD STAGE OF LABOR.\*

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NEW ORLEANS,

The third stage of labor, that time which elapses from the birth of the child until the delivery of the placenta and membrane, a time, during which, according to De Lee, more mistakes are made than in the first and second stages combined.

I feel a hesitancy in bringing before you that, which upon first thought, may be considered a much worn-out and over-written subject; but when we refer to the above definition, viz—"from the birth of the child until the birth of the placenta," we see that we are covering a period in the management of a case of labor of from a few minutes to the extreme of twenty-four hours. It is indeed a period replete with many dangers, and at times requiring rare obstetric judgment and surgical skill.

In considering the third stage of labor,

\*Read before the Orleans Parish Medical Society, April 28th, 1924.

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we shall deal not alone with the technique and methods of delivery of the placenta, but also with the management of late intraparturial hemorrhage, and with lacerations and their repair, because lacerations are, as a rule, repaired immediately, or at least should be while one is waiting for the birth of the placenta, or just afterwards.

#### *Mechanism of Separation of the Placenta*

You are all, no doubt, perfectly acquainted with the mechanism of the separation of the placenta. Perhaps the best study on this subject is by Commandiet and Chapuis, an abstract of which follows: "The mere retraction of the uterus after birth of the child is not the cause of placental separation. The separation is due entirely to those contractions of the uterus which reappear after the period of physiologic inertia. The first effect is to increase the thickness of the uterine muscle, producing an all-around diminution of the surface of the placental insertion and a considerable thickening of the placenta itself, as well as of the decidua serotina. This makes evident the presence of lacunae in the decidua. The chronic villi are stretched, and the traction exercised by them on the compact layer of the decidua is transmitted to the partitions of the interlacunar spaces, resulting in a rupture of these. The union of several lacunae constitute a first zone of separation where blood accumulates. This retroplacental hematoma increases at the same time as the process of separation and contributes to its extension, as the accumulated blood tends to escape toward the periphery of the zone of separation."

The fact that separation has taken place can easily be recognized; first, the fundus of the uterus is ridge-shaped and not spherical; second, by Küstner's sign, the drawing back of the cord after pressure from above when the placenta is still attached and that it does not move if the placenta is separated; and, third, by Strassman's sign.

The placenta as a rule comes away in less than thirty minutes. Now most methods advanced for assisting this normal, physiological process have for their basis the saving of time. Haste during the third stage of labor is one of the prime causes of postparturial hemorrhage and a stormy puerperium. In fact, Rossier states the average loss of blood after spontaneous delivery, or the use of the piston method (see below) is about 280 gm., on the use of the Crede method is 577 gm.

The most commonly employed method of expressing the placenta is that described

by Crede in 1853. It consists in grasping the uterus firmly between the fingers posteriorly and the thumb anteriorly, making firm pressure downward in the axis of the superior strait. In accomplishing a true Crede expression, the accoucher is employing great force with a resulting traumatization of the uterus. Many believe that in making a small amount of pressure on the fundus of the uterus they are doing a true Crede expression, whereas they are merely using the uterus as a piston to express the already separated placenta.

In reviewing the literature on the subject of expulsion of the placenta, one finds that some advise "traction on the cord, using as much traction as it will permit without damage." This is mentioned only to condemn it, and I wish to report a case of inverted uterus resulting from traction on the cord and pressure on the fundus combined.

Case: Mrs. X. Primipara; white; age 22. The baby was born at about 10 a. m. Labor normal; no lacerations; no hemorrhage. The midwife in attendance after waiting some ten to fifteen minutes for the placenta to deliver, attempted to do a Crede expression, at the same time making traction on the cord. As a result, the uterus inverted completely. A hurried call was sent to Touro Infirmary for assistance. The patient was found to be in a state of profound shock, and we immediately called for the ambulance. In the meantime the patient was given a 1-4 gr. of morphia and under light ether anesthesia, an attempt was made to replace the uterus. Failing, the patient was removed to Touro, dying just upon arrival at the institution.

Dantin reports two similar cases, both resulting in death from shock. He adds that traction on the cord and the Crede Maneuvers are now generally condemned in France.

The injection of the umbilical vein with some sterile solution has been resorted to in cases of retained placenta in an effort to favor separation. This method seems to have been introduced by Monjon in the early part of the 19th Century.

#### *Pituitrin in the Third Stage of Labor*

If all the pituitrin used during the second stage of labor were saved to be used during the third stage, or immediately thereafter, there would be fewer still births and lacerations.

Obstetricians who use pituitrin are about equally divided as to the advisability of using it before the birth of the placenta or immediately thereafter. S. Seides reports 500 cases in which 0.5 c. c. of pituitrin was given at the beginning of the third stage. He reports that the loss of blood was surprisingly small and that its use considerably shortened the third stage. He also

claims that it makes Crede's manual expression of the placenta entirely unnecessary.

On the other hand, Reist and Guggenheim, acting upon the glowing reports as given out by Seides, conducted two series of 100 cases each, in order to determine the value of pituitrin and pituglandol given at the beginning of the third stage of labor. Both these series were compared with a series of 100 cases without the injection and, as a result, *they have rejected the drug for the prophylactic use*. They contend that the time of separation of the placenta was not shortened and that the average loss of blood during the placental period was not markedly decreased.

#### *Retention and Adherence of the Placenta*

The improper treatment of these two conditions is the cause of many of the unfortunate sequels of the third stage of labor. A retained placenta is one that is not delivered within the first twenty to thirty minutes following delivery of the child. An adherent placenta, otherwise termed placenta accreta, is one that is due to an atrophy or absence of the normal uterine decidua, as a result of which, the trophast erodes directly into the uterine musculature, leaving no line of cleavage.

The former condition, if handled properly, need not cause any serious trouble. The treatment, which we employ on the Obstetrical service of the Touro Infirmary, and which has given us excellent results, is purely an expectant one. If the placenta does not come away in the average length of time, and then fails to do so in spite of the hypodermic administration of pituitrin and an attempt at Crede expression, we simply adopt the attitude of watchful waiting—waiting and watching for hemorrhage alone. Never, unless there is bleeding, do we invade the uterine cavity in order to manually remove the placenta. This maneuver is one fraught with many dangers, chief among which are perforation of the uterus, and post-partal infection. In a series of 483 cases delivered on Obstetrical service of Touro, during a period of six months, there were five cases of retained placenta, or a little over 1 per cent. One was expressed by moderate pressure after six hours, two after twelve hours, one after twenty-four hours and one after waiting thirty hours! In not one of these cases was there a febrile reaction.

Goethals, who made a detailed review of the subject at the Boston Lying-In Hospital, gives the following figures: In 8,182 hos-

pital deliveries the placenta was manually removed in 170 cases, with a corrected mortality of 1.76 per cent. Among the outpatient cases there were 60 in which the placenta was removed manually. One out of every four cases showed some degree of post-partal uterine infection. (In the absence of hemorrhage, I frankly believe that I would much rather take my chances with the method of the old negro granny—viz: allowing the patient to blow into a bottle, than to insert my hand into the uterine cavity under 24 hours.)

Additional figures are those of Pfloeger, who reports 174 cases of manual extraction with a morbidity of 43 per cent; Rosenthal, 39 cases with a 66 per cent morbidity, and Seiffarth, 79 cases with a 35 per cent morbidity.

Adherent placenta, or placenta accreta, is a very rare condition, occurring, according to Polak, in one out of six thousand cases. The differential diagnosis between this condition and retained placenta is as follows: After a partial or complete separation of a retained placenta there is a certain amount of uterine bleeding; there is descent of the cord and the characteristic ball-like condition of the fundus. In placenta accreta, entirely attached, none of the above signs are present and the fundus assumes a characteristic shape, being broader from side to side. The treatment of this condition is, again quoting Polak, an aseptic exploration of the uterus under anesthesia; determining the absence of a line of cleavage; hysterectomy should be done.

#### *Lacerations and Their Repair*

Lacerations during labor are much more frequent than we are given to suppose. The fact is, that many first degree injuries are not recognized as such, or, are overlooked. According to Harrar, a laceration of some type occurs in 45 per cent of the primiparous labors at the New York Lying-In Hospital.

But why consider lacerations in a paper discussing the third stage of labor? Simply because the examination for and the repair of lacerations is an integral part of that time. For it is while waiting for the placenta to separate, that we make our examination and do our repairs. Might the suggestion not be ventured that this time is well spent if for no reason other than causing us not to attempt a too early expression of the placenta.

Lacerations should be repaired at once, even those extending through the sphinc-



ter. William makes this statement, "No matter what the degree, the immediate closure of perineal lacerations by suture is urgently indicated."

### *Hemorrhage*

Hemorrhage during the third stage of labor may be due to either of two causes, viz: partial separation of the placenta, or lacerations.

Bleeding from a partially separated placenta is due to difficulties in the complete separation of the placenta, whereby the uteroplacental vessels in the detached area are open and give rise to hemorrhage. According to Opitz, various conditions may cause defective separation of the placenta; unusual thinness or want of uniformity of the placenta; pathological changes in the placenta, and deficient contractibility of the uterus. To these may be added the too early attempt of a manual expression of the placenta.

The treatment of hemorrhage consists in the administration of pituitrin and the vigorous kneading of the fundus, attempting to express the partially separated placenta. Should these methods fail, it is then, and then alone, that we advise doing a manual extraction of the placenta under the very strictest aseptic precautions.

The treatment of hemorrhage due to lacerations of the pelvic floor, the anterior vaginal wall and clitoris, or the cervix, is obvious, viz, suture.

### *Conclusions*

1. Traction should never be made on the cord. A true Crede expression should be reserved for an emergency.

2. The status of pituitrin for use during the third stage is not fully established.

3. Manual extraction of the placenta is dangerous and should not be done except as a last resort, or in the face of hemorrhage.

4. Lacerations should be repaired at once. Lacerations of the cervix should only be repaired if giving rise to hemorrhage.

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### DISCUSSION

Dr. L. A. LeDoux: I want to emphasize a subject that is usually considered too lightly. After delivery the placenta acts as a foreign body; it stimulates contractions of the uterus. In addition we have the formation of a blood clot which actually separates the placenta for us. The pressure, or Crede method, should be used to expel and not to attempt to separate the placenta.

As regards manual extraction of the placenta, I do not agree with Dr. Levy, that it is a last resort measure. In our experience, the post-partum infection per cent has not been as high as 60 per cent. The reason is that we are working entirely within the membranes. I think much of the blame could be laid to faulty asepsis and technique on the part of the operator.

Dr. Edward A. Ficklen (New Orleans): I am in accord with the speaker's opinions. In addition, I believe that every effort should be made to repair cervical tears even if they are not of great severity in order to close possible avenues of infection. Certainly, injuries to the upper portion of the genital tract are more apt to give rise to trouble from infection than those lower down.

The writer spoke of the technique of repairing complete tears of the perineum. If episiotomy is done more often such tears will not occur. I have found it necessary to do prophylactic episiotomy before extraction with forceps. A clean cut in the muscle heals kindly and does less damage in the long run than forcible rupture of the levator fibres by the fetal head.

Dr. E. L. King: I wish to emphasize two or three points. The first is the question of infection following manual removal of the placenta. We have had such cases at the Charity Hospital, which were brought in from the outside. Last year we had three of them at one time, and two of these died of the infection. So you see that it is a dangerous procedure, and if the operation has to be done, we must pay strict attention to asepsis. In our work in the white Obstetrical Service we very seldom remove a placenta manually, probably once or twice a year, in 400 or 500 cases. The placenta is generally expelled spontaneously or with a little belt. We use the Crede method occasionally, and once in a while give a dose of Pituitrin to help the uterus deliver the placenta. Sometimes we have to wait, occasionally as long as an hour. I have never had occasion to wait several hours, or even a day or so, as mentioned by Dr. Levy in his paper.

One recent author, in stressing the importance of avoiding infection, proposed the following method: the hand is introduced into the uterus within the membranes (illustrating) and then the membrane-covered hand is worked in between the placenta and the uterus wall, and the placenta is peeled loose in that way.

Another point is the question of lacerations. We have had occasion, 3 days later, to go back and sew up a bleeding vessel in the crus clitoridis, which was caused, during normal delivery, by over-enthusiasm in the matter of promoting extension of the head. These anterior lacerations are frequent, and should not be overlooked.

Like, Dr. Ficklin, I believe in the use of episiotomy, when done properly, particularly in a primiparous delivery in which a tear seems to be imminent. It is also useful in breech deliveries in primiparal, in whom you may have to go up and get the arms and the head, in which case you will need plenty of room.

Dr. A. C. King: Lacerations of the anterior vaginal wall were spoken of. I am talking to the young men now. I want to warn them against too much enthusiasm in introducing needles too deeply. I have seen tears beautifully sewed up, so much so that all sutures had to be removed, on account of the rectum having been included. They followed Dr. Newman's suggestion, but went too far, and included the rectum.

Now a word about uterine inversion. About twelve years ago a Doctor reported two cases which died. Dr. Clark reported one case which did not die. I reported a case three months later which did not die. Fortunately for us.

In the Dublin Clinic, there was one case in 190,000, while Braun reports only one case in 250,000. The shock is tremendous,—partly due to hemorrhage and partly to mechanical disturbances. When these cases do not die, the patient and the physician may consider themselves lucky. In my case, the version was due to a short cord. It measured eight inches. I had read of it, but had never seen it. I was fortunate in saving the case, and did so only by prompt treatment.

Dr. Adolph Jacobs: On account of the short time allowed, Dr. Levy did not have sufficient time to go into many details. I would like to speak of the injection of physiological warm saline solution in the umbilical vein. This simple procedure first described by Asdrubali in 1826 and by Majon in 1827 was revived by Gabastou of Buenos Ayres in an article written in 1924. The medical principal of this procedure is probably based on the fact that as a reproductal hematoma is the first cause of the placenta operation, by injecting about 200 to 400 c.c. of saline solution in the umbilical vein, the placental vessels are filled, become turgid and the capillary walls breaking, a reproductal hydroma is formed. The placenta is then separated by the mechanical action of the hydroma and by the stimulation of the uterus by its heavy contents.

Various clinics report that the manual separation of the placenta was reduced considerably by this procedure which should be used only if there is no brisk hemorrhage.

Cases are mentioned by some writers that the placenta has been left as long as five days when there was no hemorrhage and have seen separate without manual extraction. The great trouble in dealing with a retained placenta is that one can never know until one begins extraction, whether he deals with a placenta which would peel off easily, one closely adherent that a line of cleavage is hard to find or encounter a true case of placenta accreta which altho very rare must be kept in mind because in such a case emergency measures with laparotomy and hysterectomy must be resorted to.

The question of infection following manual extraction varies I believe, a great deal with the individual obstetrician and the surroundings. One naturally would not expect a high percentage of infection in cases treated in hospitals as those that are cared for in the homes and probably managed by untrained individuals.

I agree with Dr. Levy to wait in cases where simple procedures fail or where there is no brisk hemorrhage.

Dr. W. E. Levy: I quite agree with Dr. Ledoux that the Crede method is not to be used to effect a separation of the placenta. However, I do not agree with him that manual extraction of the placenta is fairly safe. As I have already stated, it is dangerous from the standpoint of

Post Partal infection, and I maintain that it is a measure of last resort.

I hardly believe that one is able to work entirely within the membranes, as Dr. Ledoux has stated.

I thoroughly agree with Dr. Ficklin that prophylactic incision is highly desirable in the prevention of tumors. In a paper read before this society three years ago, I advocated the use of the medium incision, or periniotomy, and have been following this technique with the majority of primipara that come under my care.

Dr. Ed. King, in his remarks on the danger of infection following manual extraction of placenta, has only served to emphasize what I have brought out.

I quite agree with Dr. A. C. King as regards tears of the anterior vaginal wall. I recall one case that occurred in my service at Touro Infirmary two years ago. There was a severe anterior tear extending along the lower part of the urethra. It bled rather profusely. In order to guide myself in the repair of this tear, I inserted a catheter into the urethra. This served as a guide in preventing my sutures from entering the lumen.

As regards posterior tears, I quite agree with Dr. King that there is danger of the sutures entering the rectum. Whenever I have done any deep suturing, I always insert my finger in the rectum to make sure that no sutures have penetrated into it. However, if one does, and it is not promptly removed, there is always danger of a recto-vaginal fistula.

## SPHENO-PALATINE GANGLION NEURALGIA\*

L. S. GAUDET, M. D.

NATCHEZ, MISS.

Spheno-Palatine Ganglion Neuralgia is not only of interest to the Eye, Ear, Nose and Throat Specialist, but of deep import to the General Practitioner as well.

More so to the General Practitioner from a diagnostic standpoint, as he usually sees these cases first, and often recognizes them least.

As is usually the case, patients so afflicted, call upon the Family Physician, who on account of the intensity and the variety of pain load them up with Opiates and Coal-Tar preparations to the utmost limit in many cases, with no improvement, and finally in many cases, the patient falls into the hands of someone who recognizes the trouble, weak, haggard, sleepless, exhausted, profoundly toxic, and it is just such a very interesting case that leads me to pay special attention to this form of suffering, and to bring this subject before you, with reports of some cases, which will follow.

And many cases come, assuming various types and forms.

Before proceeding further, it is well that

\*Read before the Mississippi State Medical Association, Jackson, Aug. 13-14, 1924.

a review of the anatomy of the Spheno-Palatine Ganglion be gone into.

Shaeffer gives a good and clear description of Meckel's or the Spheno-Palatine Ganglion, which is described as a small triangular body of a reddish gray, flat on one surface, convex on the other, measuring about 6 mm. long, and 3 or 4 mm. in width.

It lies close to the Spheno-Palatine Foramen, and just beneath the Maxillary Branch, or Second division of the Fifth or Tri-Facial Nerve, lying in the Spheno Palatine Fossae.

It is therefore intimately related with the lateral wall of the Nasal Fossae, Sphenoid Sinus, and some of the posterior Ethmoid Cells, as well as being in close proximity to the Maxillary sinus.

*Histologically* it is made up of an interlacement of nerve fibres, and stellate nerve cell bodies.

As in other Sympathetic Ganglia of the head, the Spheno-Palatine Ganglion has three (3) so called roots which convey nerve fibres to and from the Ganglion, namely:-

- 1 Motor,
- 2 Sensory,
- 3 Sympathetic.

*The Motor Root* is described as rising from the Facial nerve in the Fallopiian canal, consisting of visceral motor fibres which arise in the Medulla Oblongata, pass through the Geniculate Ganglion, and become component fibres of the Great Superficial Petrosal, and here uniting with the Sympathetic root, the Deep Petrosal, both fuse or unite to form the Vidian or nerve of the Deep Petrogyoid Canal, which passes along this canal and reaches its termination in the Spheno-Palatine Ganglion by Synchronizing with the cell bodies of the Post Ganglion Neurones of the ganglion. So much for the Motor Root.

*The Sympathetic Root*, of the Spheno Palatine Ganglion is known as the Great Deep Petrosal Nerve, coming directly from the Carotid Plexus.

Most of the fibres are the peripheral processes of post Ganglionic neurones arising from the cell bodies located in the Superior Cervical Sympathetic Ganglion. These fibres pass through the Spheno-Palatine Ganglion uninterrupted for distribution.

*The Sensory Root* consists of the Spheno-Palatine nerves which are two or three short stout trunks connecting the Second Division of the Tri-Facial with the upper margin of the Ganglion proper. Most of

the component fibres of these roots are dendrites of cell bodies located in the Gasserian Ganglion. These fibres for the most part, pass through or around the Spheno-Palatine Ganglion without interruption to be distributed by way of numerous branches.

#### *Branches of the Spheno-Palatine Ganglion*

**Orbital or Ascending  
Palatine or Descending  
Pharyngeal or Dorsal  
Nasal or Medial**

*The Orbital Branches* are two or three small ascending which pass through the Inferior Orbital Fissure into the orbit. They travel through the Posterior Ethmoid Foramen and are distributed to the Posterior Ethmoid Cells, and the Sphenoidal Sinus.

*The Palatine Branches* are usually divided or described under three heads:—

A—The Anterior Palatine,  
B—The Middle Palatine,  
C—The Posterior Palatine,

*The Anterior Palatine* courses through the Posterior Palatine Foramen, reaching the inferior surface of the hard Palate, and arborizes with the Naso-Palatine Nerve. It gives off a variable number of branches called Posterior Inferior Nasal branches.

*The Middle Palatine* Nerves pass through the small Palatine Foramen, and supply the soft palate, the Fauical Tonsils and the region in the immediate vicinity.

*The Posterior Palatine* also supplies the inferior surface of the soft palate. The Posterior Superior Nasal Branches divide themselves into two groups:—

**Lateral  
Medial**

branches.

*The Lateral Branches* supply the mucous membrane entering into all the structure of the Dorso-Cephalic lateral wall of the Nasal Fossae.

*The Medial Branches* cross the dorsal portion of the roof of the Nasal Fossae and supplies the mucosa of the Septal Wall. On the Septal wall mucosa the main trunk of the Medial branches pass downward and forward as the Naso Palatine nerve to the Anterior Palatine Foramen and joins its fellow of the opposite side.

#### *Anatomic Relations of the Spheno-Palatine Ganglion*

The Pterygo-Palatine Fossae is of especial importance when considering Nasal and Para-Nasal disorders, for therein is contained the Maxillary, Vidian nerves, the

Spheno-Palatine Ganglion and its outflowing branches, three important fissures also terminate therein, *Superior Orbital*, *Pterygopalatine* and *Inferior Orbital*, as well as *six foramina* namely, the Sphenopalatine, Foramen Rotundum, Pterygoid canal, Pharyngeal canal, Infraorbital canal, the Pterygo-Palatine and its accessory canals, and so close to it lie the Sphenoidal and Ethmoidal cells which often enroach on it, that we thereby more than appreciate its importance.

The Respiratory Nasal mucous membrane bear intimate relation to the Spheno-Palatine Ganglion, and in most cases a thin paper thickness of bone intervenes between the Nasal cavity and the ganglion itself, which makes it very subject to surface influences from both the nasal cavity and certain para-nasal sinuses, and these surfaces are in relation to the ganglion in proportion to the size and form of the Sphenoidal Sinuses and the Posterior Ethmoid group of cells.

#### *Etiology*

The Etiology up to this time is not clear cut, but somewhat indefinite, and I have not come across very much written on this subject, but if we stop to think of what parts this ganglion and its branches supply, and the structures that lie in close proximity to the ganglion itself, plus a little thought devoted to this subject, we can find many things to advance for the etiology or cause of this condition.

To my mind, if most patients give a history of the trouble beginning with a cold, and most of them do, that come under my observation, then it is reasonable to assume that inflammatory changes that take place in the Nasal passageways, including the Ethmoid and Sphenoid Sinuses would rank as one of the leading causes, which coupled with the fact that most of my cases occur during the Winter months, would further bears out the above statement.

Again, delving into the etiology of Tri-facial Neuralgia, which in a way is closely associated or related to Spheno-Palatine Neuralgia, we find there many things to advance as a cause.

Toxemias no doubt have a bearing on this disease, as Malaria, Anemia, Constipation, Syphilis, Rheumatism etc.

#### *Appendix*

Byrd, in the Eye, Ear, Nose and Throat Monthly, April 1924 gives some interesting data in the general distribution of the Terminal branches of the *Nasal Ganglia*.

He likens it to a Sub-telephone exchange, with the brain as the main or great telephone exchange.

He gives the law of distribution of Meckel's Ganglion thus: *A disturbance arising at any point in Meckel's area may be transmitted to any other point, but in so doing it must pass through Meckel's Ganglion and can accordingly be blocked off at that point.*

He also states another important point, namely:—*Meckel's Ganglion has a long distance communication with the pneumogastric nerve, but has up to now not been able to trace the exact course satisfactorily.*

Let us hope that Dr. Byrd will give us more enlightening information on this interesting subject.

Dental Caries, and other pathological changes of the teeth, surely come in for their share.

Then there is the changes we find in Ethmoid and Sphenoid inflammatory processes, particularly the Posterior Ethmoids, that like the Sphenoid, lie in such close proximity to the ganglion, besides being supplied with branches from the ganglion. I would even consider recurrent attacks beginning with a cold or Coryza, as almost pathognomonic of Sinus disease.

Looking to the eye itself, we can there find certain diseases that could account for suffering in connection, and any inflammation of the Uveal tract, particularly Uveitis, Iritis and even Glaucoma, as Byrd of Florida connects the last named disease with the Spheno-Palatine Ganglion.

#### *Erose*

*Symptoms*:—Of course the paramount symptom is pain, just as we find in any other form of Neuralgia, but the pain in conjunction with other phenomena either simple or complex, assume a grouping which Sluder has called the Neuralgic Syndrome. From this syndrome group often time ramify other symptoms either in connection with it, or alone and called Isolated phenomena, often rather obscure, and only understood by close observation and study. These cases often present difficulties in diagnosis as we will show later on.

The usual picture of a Neuralgic Syndrome is as follows:

Patient usually complains of a previous cold, either severe or light, and following this, more or less pains, usually unilateral increasing in severity, worse at night, with

loss of sleep, little relief from medication, with a gradual lessening of pain towards morning, and the ability to sleep some during the early morning hours. This pain, patients will point out and explain, begins in the region of the eye, side of the nose, upper and lower teeth, extending to the throat and neck, into the temple, scalp, ear, mastoid region, occipital region, running down the neck, into the shoulder and arm, forearm, and even the fingers.

Most cases point to a severe point of pain located back of the Mastoid from 3 to 5 cm, and indicate this as the maximum severity. Sluder calls especial attention to this, but I have seen several cases without this.

The patient will also describe a coldness of the face, and often a numbness of the arm of the affected side. With some variations this grouping is fairly constant and with casual observations easily recognized.

Not so however, coming back to the Isolated Phenomena as mentioned a little while previous. Here we may have presentation of a symptom or symptoms which require careful observation and study and thought to draw any worthwhile conclusions.

For instance, Nausea, Vertigo, Glosso-dynia, Paragusia, Sneezing, Rhinorrhea, Lacrimation, Photophobia, Heminopsia, Aphasia, are often not suggestive of a nasal examination in connection with Spheno-Palatine disfunction, still treatment applied to the ganglion brings relief in many cases.

Suffice to say that about all observers have about agreed to and accepted Sluder's Classical description of the Neuralgic Syndrome.

Insofar as the isolated symptoms which come under the Sympathetic Syndrome, observers are constantly discovering and adding to the already large series of symptoms.

Sluder and Green, in the *Journal of the American Medical Association* of Nov. 24, 1923, page 1781 publish a comprehensive and interesting article on Functional Ciliary Hyperesthesia, and the ability to control same through cocainization of the Spheno-Palatine Ganglion. In their comments, they say that it is reasonable to infer that the great pain of Ocular disorders, Iritis, Keratitis, is transferred by some path through the Spheno-Palatine Ganglion since cocainizing the ganglion often brings relief.

More isolated symptoms may be expected to come forward as time passes on because of the interesting phenomena the study and observation brings out.

*Diagnosis*—So closely resembling Neuralgia when observed casually, it is more often diagnosed as such, so many times Idiopathic Neuralgia which of course is indefinite, and a more suitable name would be Ignorance Neuralgia, as we are learning more and more where there is an effect, there is a cause a little further on. Consequently Neuralgia of the Tri-facial nerve, in whole or in part often clouds the diagnosis unless well understood, and vice-versa with Nasal Ganglion Neuralgia.

Let us see:—If we can understand and diagnose Tri-facial Neuralgia. By doing we make the diagnosis of the other easy enough, except in cases of Isolated Symptoms or Phenomena.

One of the most interesting writings on Tri-facial Neuralgia that I have had the opportunity to peruse is from the pen of Dr. Charles Metcalfe Byrnes, found in Tice's Practice, Volume 10\*\* and with pleasure quote him because he is a Mississippi boy, and from Natchez at that.

The usual symptoms of Tri-facial Neuralgia, sudden onset without warning, pains, stabbing, darting, lightning like, which may be in the upper or lower jaw, or in one or two teeth, with intervals varying from a few days or weeks or months, with the attacks becoming worse with each paroxysm is very frequent.

The attack itself is characterized by a pain of short duration, lasting from 15 to 30 seconds, rarely one minute, and the paroxysms may run up to 40 or 50 before ceasing. Patients describe these attacks as jabs, darts, flashes, twinges etc.

The distinguishing features are short duration of pain, paroxysmal, complete relief between attacks, with sudden onset and cessation. Again, the pain always follows the anatomical distribution of the Tri-facial Nerve tract.

As peripheral irritation so frequently induces an attack, patients in indicating the area of pain, will touch the face as gently and lightly as possible with one finger or two fingers, and will shrink from the examiner.

We also find that Tri-facial-neuralgia often accompanied by Vaso-Motor disturbances as well as secretory disturbances, as excessive lacrimation, injection of Conjunctiva, nasal discharge, salivation, localized sweating etc.

The disease is nearly always unilateral, may affect the three branches, or only one of them, as in Ophthalmic Neuralgia, Maxillary Neuralgia, or Mandibular Neuralgia.

The diagnosis of Tri-facial rests upon the following:

- 1—Usually occurs after 30 years.
- 2—Patient in good health as a rule,
- 3—Pain of short duration.
- 4—Complete freedom of pain between the attacks.
- 5—Attack often brought on by peripheral irritation.
- 6—The manner in which the patient indicates the pain.
- 7—Both in the male and female.
- 8—Pain worse in day time.
- 9—Pain along the nerve tracts.

In contradistinction to the above, in Spheno Palatine Syndrome, the cases I have seen were all female, the pain much worse at night, no peripheral sensitiveness in the degree of acuteness as in the Tri-facial form, pain not limited to the Tri-facial nerve tracts, etc.

*Treatment:*—The treatment instituted when the patient is first seen is the application of a solution of 20 per cent Cocain to the region of the Ganglion on the affected side, making from three to five applications, after which a 10 per cent Solution of Silver Nitrate is applied.

If the pain repeats itself, the patient returns, and the same treatment is applied. If that does not give long enough intervals of relief, I then inject the Ganglion through the Spheno-Palatine Foramen, going in through the mouth opposite the second molar, about 5 mm. towards the medium line of the hard palate, using a long enough needle to penetrate about 35 mm. I first of all use a small quantity of 1 per cent Procaïn Solution to inject ahead of the needle as it penetrates, and then remove the syringe, leaving the needle in position, and then inject from 5 to 10 minims of 5 per cent Phenol in Alcohol.

With the previous injection of Procaïn, the pain and burning is very much diminished, though there is some stinging and numbness following, even persisting to the next day.

Of course, it must not be forgotten that proper attention must be given to the general condition of the patient, proper elimination, rest, diet etc.

I usually stop all forms of opiates after the treatment as the patient is so much more comfortable, that there is no further use for pain relieving remedies, except in some very few cases.

Case No. 1 This is really the worst case of suffering from this condition I have ever observed.

Colored Female—37 years.

This patient was brought to my office supported by two persons, so weak that she could hardly walk, with the following history:—That for 8 weeks she had not been able to sleep without op-

iates of some kind, that she would doze off, and waken with screams from violent pain, that the opiates were becoming less and less effective, and that her sufferings were becoming unbearable.

Examination showed her to be very weak, not able to stand alone, pulse, 126, temperature 100 3-5, tongue heavily coated, foul breath, no appetite, nauseated, drowsy.

The left eyeball was tender on palpation, also the left lower jaw and chin, larynx, neck etc.

This pain was described as throbbing, getting worse at times. This condition following Dengue fever she stated.

She also complained of earache on the same side, with a very painful spot about 3 cm back of the ear.

Nose and throat was a little congested, and tonsils mildly infected. Transillumination negative.

Previous to that she had pains radiating down the neck into the shoulder and arm into the fingers, but that was now better.

What struck me as odd, was intense suffering in spite of all the opiates she had been taking.

I made an application of 20 per cent Solution of Cocain to the Spheno Palatine Ganglion through the nose, on the left side, the pain eased, and in about 30 minutes the pain was gone, and the patient smiling. She was sent home, went to bed, and told me on her return later that she had slept for 20 hours without waking and without nourishment, as she was too exhausted to awaken.

I had ordered all opiates stopped and gave her large doses of Magnesium Sulphate daily to bring on free elimination.

Thirty hours after the first treatment she again returned complaining of some soreness, some pain, and earache on the same side. I applied the same treatment as the day before, and got relief as on the previous day. Again returning on the following day with the same condition but not as severe, I then proceeded to inject the Ganglion with a Solution of Cocain and Alcohol through the Greater Palatine Foramen. After insertion of the needle for 35 mm. I slowly injected 10 minims of the solution. This was followed by some burning sensation which lasted a few minutes. I used 6 minims of grain alcohol, and 4 minims of 1 per cent Sol. of Cocain.

Two days later patient returned, and complained of some numbness about face and neck, but no more pain.

Three months after she had not had a return of the condition.

Case No. 2 This case is of interest because the attack I saw her in and one previous were diagnosed as Acute Mastoid, and treatment for that purpose.

This patient gave a history of fairly good health, but not very strong, and had been operated on 15 months before for Acute Appendix.

About one year previous had had a similar attack of severe pain in the ear and mastoid region running down the neck into the arm. Was treated for Mastoiditis with ice bags to Mastoid etc., and finally got over the attack which she said gradually wore off.

When I saw her she gave a history of having had an attack since 5 days, the same kind of pain and location as the pain a year before. This pain was very severe back of the Mastoid region, and in the ear, and running down the shoulder and neck, into the arm.

She had ice bags to the Mastoid region, and I was called to examine the ear. This I found perfectly normal in appearance and no indications

of Middle ear or Mastoid troubles. The right eye was red, free lacrymation, and the pain very marked in the neck and shoulder.

As I did not see the patient again, I did not have the opportunity to treat her, but I understand since then a surgeon operated upon her and removed the Gasserian Ganglion. This is merely hearsay however. She had a typical picture of Spheno-Palatine Ganglion Neuralgia.

I would be very glad to see this patient since the operation was done, and get more information.

Case No. 3 White Female, Age 29 years old. General condition was good, and seemed to be in perfect health, and gave no past history of interest.

About 4 days previous to me seeing her, she was taken with a very severe earache on the right side. Examination of the ear revealed same to be perfectly normal. Her teeth were all in good condition. Said she had developed a little cold a few days before. Cocain applied to the Spheno-Palatine Ganglion on the affected side, relieved the pain immediately.

She returned home, and having a recurrence came back, and then I proceeded to inject the ganglion as in the previous cases. She reported better for several days, and then disappeared and has not reported to me any more, though several months have elapsed.

Case No. 4 Colored Female Age 24. Came in and gave a history of pain of a month duration, worse at night, affecting top and left side of scalp, running to left eye with lacrimation and photophobia and injected conjunctiva on the same side, with teeth of both upper and lower jaw being affected. This pain radiated to the neck, shoulder and down the arm on the left side.

She gave a history of being healthy, no venereal disease of any kind, usual childhood diseases, had children and they were in good health.

Examination revealed chronic tonsils, septal spur left side, some dental caries, otherwise nothing of importance. She had taken drugs of all kinds, but had no relief. Cocainization of the Spheno-Palatine Ganglion left side, gave her complete relief in 10 to 15 minutes, which was lasting. I saw her several times in the next two weeks, and she had no recurrence.

In this case, I also stopped all forms of opiates, ordered free elimination, and moderate diet. This I think is just as important as the application.

Case No. 5 Colored Female 23 years. Married no children. Had lost some weight, was anemic and felt generally run down.

She gave a history of aches and pains running down the neck into the shoulder and arm, which she had felt for sometime, and was always worse at night. Her throat was in good condition, also her teeth. Her nose was somewhat blocked up on the left side with the middle Turbinate, which was on the same side that she complained of the pains, and on shrinking there was observed a small quantity of pus trickling from the middle meatus. The Naso Pharyngoscope showed this coming from the Ethmoids posteriorly and the Sphenoid, and on washing out the Sphenoid, some pus was found in the washings.

Cocain applied to the ganglion on this side relieved the pain, and after two more washings and applications the pain did not return, and she refused any surgical treatment.

This is clearly a case of inflammatory changes

in the posterior Ethmoids and Sphenoid as being the cause.

Case No. 6\*\*\* Colored Female Age 24 years. Married. Gave a history of headaches for several weeks, all on right side, worse at night, diminishing toward morning. This pain she described as being in the eye ball, teeth, side of nose, ear, back of ear, neck, throat, shoulder. She also had pains in arm and forearm, but were now better, but only her arm felt numblike and dead. Pains nearly disappeared during the day, but never left her entirely.

Appetite was poor, bowels sluggish, had taken all kinds of headache medicines which only gave temporary relief, and had not consulted a physician until she came to my office. This presented a classical syndrome, and application of Cocain to the painful side, relieved her of the pain. She was sent home, all medication to relieve pain was stopped, and elimination ordered.

She was seen three times after this, with only partial return of the pain, and applications of cocain made each day and did not return after that, so the pain must have left her entirely.

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#### DISCUSSION

Dr. J. J. Shea, Memphis, Tenn.: The Spheno Palatine Ganglion Neuralgia patients make up the majority of the unsuccessful cases in rhinology. If we divide the headaches and neuralgias into two types according to their distribution, we will find that those confined to the lower half of the head are produced by the irritation of Meckel's ganglion or its branches. The patient comes to us seeking relief from a definite pain at some point and if we stop that pain the patient is satisfied and time will be allowed for further investigation into its cause. But if no relief is had, the patient becomes dissatisfied and the opportunity for further study of the case is lost. When localized pain without local inflammation is encountered, anesthesia of Meckel's ganglion should be performed. This will greatly aid in establishing the diagnosis. A complete nasal examination under the above circumstances requires a cocainization of the ganglion in order to establish a correct diagnosis. If the cocainization of this ganglion does not give temporary relief from the pain or headache, then sinus disease is not the cause of it and surgery on the sinuses will fail to relieve the pain.

The cocainization of this ganglion is necessary in all routine sinus examinations. If the ganglion is to be injected the first trial should be with a 2 per cent solution of novocain. If anesthesia is obtained, alcohol with 5 per cent phenol may then be injected. If the injection is into the fossa containing the ganglion the solution will remain in the tissues but if the solution is injected into a posterior ethmoid cell it will escape into the throat—so that the escape into the throat of the fluid after the injection may be taken as an indication that the injection was not into the ganglion. The symptoms are dependent upon the type of the fibres of distribution. The sen-

sory fibers will cause pain, at first being referred to the full distribution and later being localized to a single branch, i. e., a tooth, an eye, behind the ear or deep in the nasal cavity. The sympathetic fibers will cause vasomotor disturbances such as rhinitis and blockage of the Eustachian tube and with its connection with the carotid plexus, it is possible to explain many of our reflex phenomena, such as asthma of nasal origin. Through the trophic branch the growth and development of the sinuses can be arrested and it is our opinion that this is the case when infections of the sinuses produce such an arrest and as a result the sinuses remain infantile throughout life.

I prefer injections by the Sluder method as the ganglion is but 6 mm below the surface of the membrane while it is 35 mm away from the point of injection when the Palatine or Reaves method is used.

## CLINICAL OBSERVATIONS OF THE PREVAILING GRIPPAL INFEC- TIONS AMONG INFANTS AND CHILDREN.\*

MAUD LOEBER, M. D.,

J. E. POLLOCK, M. D.,

AND

F. M. DIRMANN, JR., M. D.

NEW ORLEANS

In presenting to you our observations we endeavor to give you a picture of the cases which we encountered, because they are not clearly la grippe as we are wont to see it, nor influenza as we recently had visit us, but are an entity not previously met with so commonly as has this infection, and not classified in the text books under this title.

We hope your discussion and observations will aid to elucidate and crystalize this particular form of grippe.

We noticed that the infection did not single out any particular group of children, neither age nor previous condition of health were contributory factors, that the disease manifested itself in five fairly distinct varieties, namely:

1. Those cases which have primarily the lesions and symptoms directed to the rhino pharynx.

2. Those cases which have primarily the lesions and symptoms in the trachea and upper respiratory tract.

3. Those primarily in the smaller tubes or lung tissue; broncho pneumonia.

4. Intestinal type.

5. Any combination of two or more of these varieties.

(1) Those cases which follow type 1

began with symptoms of ordinary coryza. The nasal discharge assuming a thin mucous character—frequent sneezing—a mild conjunctivitis, more frequently not conjunctivitis, but a red grippal throat—no exudate on tonsils, though the tonsils were red and slightly swollen, the pharynx however was much congested and presented an appearance of inflammation.

Chest and abdomen negative. The temperature ranged from 99° to 101.2° F.

The child's appetite was slightly impaired, digestion good. There was present a tight unproductive cough. The course of the disease was protracted and the child seemed apparently more ill than the physical findings and temperature would warrant. After several days the character of the nasal discharge became thicker and assumed a purulent character, the cough became somewhat improved and the characteristic feature of this disease manifested itself namely, without any apparent cause the train of symptoms returned and the child showed a relapse instead of the looked for convalescence and recovery. Two or more of the recurrences were likely to manifest themselves before complete recovery.

As with all grippal conditions one attack seemed to predispose to others, but as before mentioned this occurred in convalescence before the primary attack had been completed.

(2) In type 2 the cases began with symptoms of tracheal cough and hoarseness, with the symptoms of the initial coryza minimized. In these cases, however, the throat showed the same redness that was so markedly shown in the type 1 cases. The character of throat that we are accustomed to designate as "grippal throat." The characteristic features in these cases was the fact that the cough, though progressive in character, was dry, explosive, paroxysmal, stimulating pertussis, did not as a rule progress to a true bronchitis or broncho pneumonia, the chest being remarkably clear throughout, despite the progressive hoarseness, approaching aphonia at times, and the distressing, exhausting cough. These cases also were accompanied with fever of a low grade.

The other symptoms relating to the digestive tract and other systems are the same as type 1. Again as in type 1, relapses were wont to occur just as one looked for convalescence. In both these types the weakness and loss of strength, vigor and pep were a notable feature of convalescence.

\*Read before the Louisiana State Medical Society, Opelousas, April 22-24, 1924.



(3) In type 3 the initial symptoms of type 1 and 2 rapidly passed into a true bronchitis and broncho-pneumonia. The red throat persisting for some time even after the physical signs appeared in the chest, the dry irritating cough, added to the exhaustion of the little patient. As with ordinary broncho-pneumonia the course of the disease was protracted.

(4) In considering the fourth variety our attention is directed mainly to the intestinal tract.

The child has a grippal throat, red and inflamed, and may or may not have coryza, usually, however, there is a slight coryza, but the characteristic feature here is the symptom of diarrhea, the stools having a foul, putrefactive odor. This character of stool persists for approximately 48 hours, the odor disappears, but the watery stool with mucus and undigested food persists. Distention of the abdomen was of frequent occurrence in older children and the colicky pains were complained of.

Unlike the usual ileocolitis, the prostration is not in proportion to the physical findings for often the mucus is streaked with blood and the baby seems playful, appetite not disturbed and there is no vomiting. The usual temperature curve, however, persists.

(5) In type 5 the combinations make up the picture, two or more varieties being present in the case.

#### *Complications and Sequelae*

The most frequent complication was otitis the most pronounced and most frequently met with sequelae was the anemia and prostration, lack of initiative and buoyancy and the pristine vivacity of the healthy infant seemed to take quite a long time to regain.

#### *Conclusion*

We believe that we have recently met a new manifestation of grippe which exhibits 5 distinct varieties, as mentioned in the opening of our paper.

#### DISCUSSION

Dr. W. H. Seeman (New Orleans): I was very much interested in Dr. Loeber's classification. I have had a case this winter and have observed at least three cases of grippal throat in which the obstruction and interference with respiration became so severe as to justify tracheotomy. The tentative diagnosis in the case was diphtheria engrafted on a grippal base. The cultures from the throat were negative, and even after the tracheotomy had been done and material was obtained directly from the trachea, it remained negative for diphtheria. We find invariably in these cases the staphylococcus aureus very frequently associ-

ated with hemorrhagic streptococcus. But here were three cases that gave a typical picture of laryngeal diphtheria that were proven to be negative by repeated cultures.

I simply want to call your attention to the frequency of this complication.

Dr. Homer Dupuy (New Orleans): The trouble, type 1 is in the upper respiratory region. For instance, in that type much of the exasperating cough is due to what we might anatomically term a pharyngo-tracheal involvement and inflammation, and if you wish to allay the cough to some extent you must apply the treatment post nasally. There is a constant profuse dripping of secretions from the naso-pharyngeal region, and any treatment for the relief of that means applying it from the nasal side, therefore the head is thrown backward, and we find that adrenalin, 1 to 3,000 or 4,000, injected through the nostrils on both sides will tighten up these parts and greatly reduce this secretion. If adrenalin is not to be used, then possibly argyrol 10 per cent will work as well. I believe that much of the coughing can be greatly relieved in type 1 by treating the naso-pharynx.

Dr. E. L. Sanderson (Shreveport): I would like to ask the doctor in closing to give us the treatment. We have had two cases of this disease as she described it and I would like to know what her treatment is.

Dr. Maud Loeber (closing): As far as treatment is concerned, it was mostly symptomatic. We did not, as Dr. Dupuy suggested, use adrenalin, but we did use menthol with liquid albolene feeling we might get less tenacious mucus. That was what we used in the coryza. Later on when we got an irritating cough we used croup kettles with benzoïn added to the menthol as an vapor inhalation in hot steam. For the broncho-pneumonia we relied practically on treatment with camphor stoups, feeling that in most infants we can give camphor by inhaling and get a better respiratory and cardiac effect than by giving it by mouth. Where the irritation was very severe we sometimes gave a sedative cough mixture.

In the diarrhoeas we used principally the *Bulgaris bacillus* to overcome the putrefaction, which was characterized by the odor of the stools. We were not fortunate enough to get complete analysis of all of our cases as to the bacteriological findings, and I feel that Dr. Seeman's contribution is of real value to the paper.

### OSSIFYING SUBPERIOSTEAL HEMATOMA.\*

HERMANN B. GESSNER, M. D.

NEW ORLEANS

Two cases are here reported because of the diagnostic interest and because of the few references found in a search of the literature.

The first case was that of a star football player, Albert D., who was kicked on the front of the left thigh in a practise game in November, 1909. He stayed through the game, limping and suffering severe pain. The knee was stiff and the seat of severe pain when attempts at flex-

\*Read before the Orleans Parish Medical Society, May 12, 1924.

ion were made. At the end of five days the initial swelling had gone down, but there appeared "to be a solid mass in the muscle." The treatment consisted of massage, active and passive motion and baking. The pain diminished, but the stiffness in the knee persisted and the mass seemed to be getting harder and harder. When six months had passed the case came under the care of Dr. P. A. McIlhenny and the writer. At this time the diagnosis of myositis ossificans had been suggested. This was rejected because it was easy to grasp the quadriceps extensor mass and lift it clear of the hard bony mass (five inches by three inches) underneath. There was evidently no pathology in the muscle. Functional disturbance was due to the fact that flexion was closely limited by the extensor running over the bony prominence. An X-ray picture was taken, which on account of the lapse of time and lack of storage facilities is not available at present; the report of the radiologist is likewise not available. However, as the diagnosis on his Touro Infirmary record is "osteoma" that was probably the X-ray diagnosis.

May 31st, 1910, Dr. McIlhenny operated with my assistance. A longitudinal incision was made on the lateral surface of the femur, the periosteum was divided and the projecting mass of new bone easily chiseled off. Recovery was uneventful. After-treatment included active and passive motion and baking. The end result is best shown by the fact that in 1917 he was accepted by the army for aviation service. In February, 1923, nearly 13 years after the operation, the anatomical and functional results were excellent.

Our conclusion on discussing the case after operation was that the kick had caused a subperiosteal hemorrhage; the blood failed of absorption, was organized and permeated by neighboring bone cells, the final result being an ossifying subperiosteal hematoma.

The second case was of special interest from the functional viewpoint. Dan R., negro laborer, 40 years old, was admitted to the Charity Hospital, December 12th, 1922, with a diagnosis of periosteal sarcoma of the right femur, based on an X-ray picture. The mass was of the size of an orange, slightly tender, deep-seated, smooth, fixed to the bone; the soft parts moved freely over it. The situation was a serious one from the functional point of view, for he had had an amputation through the middle of the left thigh for injury. If the diagnosis was correct, amputation at the

hip was indicated, as the hospital had then neither radium nor a deep X-ray machine. This amputation might end in death by shock; if it did not he would be left with a hip amputation on one side, a thigh amputation on the other. The history was that of an injury three months before, a piece of timber having struck him. The whole thigh was swollen and painful; swelling went down after a few days leaving a mass stationary in size but painful. It did not seem reasonable to expect a large sarcoma to have sprung up within three months after a single injury. A second picture was requested and the case brought to the attention of the director of the X-ray department, Dr. A. Granger. The excellent picture then taken was interpreted by him as showing a large ossifying hematoma of the femur (Fig. 1). Operation was per-



Figure 1.

formed December 28, 1922. Through a lateral incision over the right femur the mass was exposed and found attached to the femur by a narrow longitudinal base about two inches long; after division of the periosteum the mass was easily chiseled off. Recovery uneventful. Inquiry through the Social Service Department (Misses Nairne and Norman) elicited a personal report in May, 1924, that he is steadily at work and having no trouble.

In both cases it was the femur which was involved; in both there was a history of trauma, of considerable pain and swelling, and of a firm mass remaining at the end of a week. The diagnosis was based on the clinical history, on palpation, and on the X-ray picture.

I am indebted to Dr. McIlhenny for permission to report the case of A. D.

#### DISCUSSION

Dr. O. C. Cassegrain: I am afraid Dr. Gessner

has been a little too modest in not taking proper credit for his diagnosis in the second case. I had the good fortune to see the case in the clinic. The thigh was a horrible thing to see—swollen, distended—and looked every bit like a case of sarcoma.

This brings out a wholesome lesson, the value of repeated X-ray examinations in doubtful cases. The first X-ray was interpreted as a sarcoma. It was not until several days later that the second picture was taken; if the doctor had accepted the first picture and amputated the thigh he would have done an unnecessary operation.

Dr. E. Denegre Martin: I would just like to ask the doctor if the growth was entirely subperiosteal?

Dr. Adolph Jacobs: I have nothing to add except that I want to congratulate Dr. Gessner for the good judgment he used in not accepting the X-ray diagnosis of sarcoma and amputating the thigh.

While the laboratory is of great aid and no physician should practice without this valuable adjunct, still entire reliance should not be placed upon it. A clear clinical analysis of a case as Dr. Gessner has shown in this case has saved this patient from being a sad cripple for the rest of his life.

Dr. H. B. Gessner (closing): I have nothing to add, but I do wish to give credit to the X-ray department for making the diagnosis clear in the second case. In teaching students I like to tell them not to rely too much on the laboratory. If you have read any articles lately by such men as Cushing you will find they believe there is a danger of over-emphasizing laboratory work. Cushing says that he is inclined to think, in teaching students, it might be well to give them two years of clinical work with an outline of the fundamental sciences and then to take them to the laboratory and teach them histology, X-ray, etc. I do not know whether he is really serious about that or not. I do not go as far as Dr. Cushing, but I do believe that there is a tendency to teach too much reliance on laboratory aids. Tulane is all right in that respect; our men get contact with patients as well as the laboratory work.

I wish to lay stress on the value of the X-ray in this case. The last picture was clear, and made the diagnosis.

## ANASTOMOSIS OF THE SEVENTH AND ELEVENTH CRANIAL NERVES TO CORRECT FACIAL PARALYSIS.\*

J. T. NIX, M. D.,

NEW ORLEANS.

Paralysis of the seventh cranial nerve causes a deformity more conspicuous, more disabling and more discomforting than that of any nerve of corresponding size in the entire body. The eye cannot close, but constantly weeps; the mouth dribbles saliva from the affected side—speech is interfered with, mastication impaired, the delicate shades of countenance are lost. Joy, happiness, sorrow, shock, surprise, all the

emotions have for their common expression—the same blank stare.

How embarrassing or even how blighting to a future might such a condition be if it occurs at the bloom of youth or early adult life, and here it usually occurs.

The facial nerve is the motor nerve of almost all muscles of the head, except those of mastication and the muscles of the tongue. It leaves the cranium by passing



Fig. 1. Facial nerve paralysis before operation. Inability to close eye, blank expression of face.

through the internal auditory meatus with the auditory nerve, then it traverses the petrous portion of the temporal bone, lying in the facial canal or fallopian canal. Here it gives off several branches and leaves the skull from the stylo-mastoid foramen, emerging as one small nerve trunk. It describes an arch convex inferiorly around the external acoustic meatus and traverses the substance of the parotid gland forming the parotid plexus. As close as possible to the stylo-mastoid foramen is the point of election where the nerve is divided for anastomosis.

The case which we present was absolutely unavoidable at the time. The patient was critically ill and a real, life-saving emergency operation had to be done even at the expense of the facial nerve.

The spinal accessory or eleventh cranial nerve is purely motor. It is formed by the union of fibres which take origin from the brain and spinal cord. It leaves the cranium through the jugular foramen and divides immediately into the internal ramus which blends with the vagus and an external ramus, the larger portion. This passes in front of the external jugular vein, then

\*Read before the Louisiana State Medical Society, Opelousas, April 22-24, 1924.

backward, downward and laterally to the medial surface of the upper third of the sterno-cleido-mastoid muscle which it pierces. In its course to this point there are usually found several anastomosis with



Fig. 2. After operation, beginning return of muscle function.

the cervical nerves. At the point of entrance with the sterno-cleido-mastoid muscle is considered the best for anastomosis.

The hypoglossal nerve is very often considered as the nerve of choice for facial anastomosis, however, it was not used in our case for the following reasons:

In order to secure the best results, complete division of the hypoglossal is necessary. Implanting the distal cut end of the facial into the trunk of the hypoglossal or using a part of the hypoglossal nerve, reflected back, to anastomose with the facial, does not give the same result as when the entire twelfth nerve is used. Complete division of the hypoglossal nerve causes serious impairment in the function and use of the tongue, which represents a strong contra-indication.

After ten careful cadaveric dissections of the upper triangles of the neck with exposure of the facial, spinal accessory and hypoglossal nerves the long trapezius branch of the spinal accessory was selected to carry the central impulse. The site of entrance into the sterno-cleido-mastoid muscle was considered the point of election for division of the nerve. Here it is nearer the surface, and can be reflected upward to meet the facial nerve with ease. Division of the trapezius branch of the

spinal accessory is not nearly so likely to cause annoyance as division of the twelfth nerve, and whatever disturbance of muscular function does follow can usually be corrected by muscle training. Operation: Begin the incision at external orifice of ear close to the mastoid bone and extend it downward two and one-half inches, following the anterior border of the sterno-cleido-mastoid muscle. Cut through the fascia and expose the parotid gland at the extreme upper end of incision. A small cut is now made into the posterior border of the parotid gland and by careful blunt dissection with a Mayo scissors the parenchyma of the gland is divided until a small silver white nerve is exposed, branching into the gland and taking origin as one trunk through a small orifice in the base of the skull—the stylo mastoid foramen. The nerve is now cut with a very sharp knife as near as possible to the stylo-mastoid foramen. Through the sheath of the distal end of nerve two small silk sutures are passed to act as guides until the union is made. The spinal accessory is now located beneath the deep fascia, directly below the transverse process of the atlas where it is covered by the posterior belly of the digastric muscle. Some authorities recommend division of this muscle in order to obtain better exposure, but this is hardly ever necessary. The nerve is now followed downward to its point of entrance into the sterno-cleido-mastoid muscle. The main branch pierces the muscle, continuing to supply the trapezius. Other small branches are given off proximal to this, anastomos-



Fig. 3. After operation, complete return of facial expression. 75% return muscle function.

ing with branches from the cervical nerves. The trapezius branch is now supported and divided just within the substance of the sterno-cleido-mastoid muscle. Bridles of silk are now passed through the nerve sheath as with the facial. In dividing both nerves, a very sharp knife was used and great care exercised so as not to crush the nerve ends as this would materially retard or possibly prevent restoration of nerve continuity.

By cutting the facial close to the stylo-mastoid foramen and the eleventh nerve at the entrance of the trapezius branch into the sterno-mastoid muscle, we are able to approximate the proximal end of the eleventh to the distal end of the seventh without the slightest tension, almost securing redundancy. Very fine sutures of double O chromic catgut were now passed interruptedly through the nerve sheaths and the opposing neurilemmas firmly approximated. In order to additionally secure the anastomosis, a small strip of sterno-mastoid muscle was cut from below upward, leaving the upper end attached. This strip of muscle 1-4 inch by 1 1-2 inches was wrapped over and sutured around the site of neurorrhaphy. A few interrupted catgut sutures were now passed through the fascia and the skin incision closed with dermal.

#### *Post Operative Course*

For two weeks following the operation the head was bandaged and fixed in the position of torticollis tilted to the side of the operation. This was done to relax all muscular structures in neck and relieve any possible strain on sutures. Patient made an uneventful recovery, getting up in a rolling chair on the fourth day and leaving the institution eight days after the operation. Nitrous Oxide-Oxygen-Ether anesthesia was used. Operation lasted one hour and 35 minutes. The first evidence of motion appeared about four weeks post operative, there being some slight movement possible at the angle of the mouth. Motion came back slowly at first, but after the fourth month, progress was very rapid. Complete and independent closure of the affected eye was one of the last muscle functions to return. At the end of one year nearly every muscle action of the normal side could be reproduced on the reconstructed one, there being a slight difference in degree of contraction in favor of the normal. The muscles work in unison and there is very little deformity. The patient has on several occasions been em-

barrassed by the hand suddenly giving away while holding a glass of water or other weight. This, however, has been very exceptional.

Extensive mastoid disease with Mastoidectomy and facial paralysis—occurred September 20, 1919. Neurorrhaphy, June 29, 1920, nine months and nine days after.

Subsequent to the first Mastoidectomy the ear never stopped discharging pus, and in January, 1922, the condition again became very acute, requiring a second Mastoid operation. The following notes by operator will explain findings at the time.

"In former operation it is evident that a modified radical operation was performed, but no flap was made. First operation followed by facial paralysis—Posterior auditory canal wall found removed down to aditus ad antrum, but ossicles and drum were not removed. Following first operation the posterior wound continued to discharge and finally there was a small slough of bone extended. The patient began to have dizzy spells associated with severe nausea and vomiting and a reopening of the wound was advised. At this operation, necrotic bone was found in mastoid region and the dura found exposed in epi-tympanic region about size of a 10-cent piece with pus formation, extra dural abscess.

#### *Second Operation*

A complete radical mastoid was done and a plastic flap of external canal was made by Pansy method. During the operation the site of destruction of facial nerve was found at the aditus. The proximal end of nerve only could be seen as the distal end had retracted in the fallopian canal. Direct neurorrhaphy, even if the field were not infected, would have been impossible, as the distal end of nerve could not be located.

Immediately following this operation the patient developed a diffuse cellulitis, adenitis and myositis of that side of the head. The nerve anastomosis was involved in the inflammatory process and muscle function was greatly impaired for several weeks following. With the subsidence of the inflammation, however, function rapidly returned.

At the present time four years after the neurorrhaphy—Mrs. M. has been restored to the beauty and charm that she previously enjoyed. There is still some difference between the two sides of the face, due to the slight variance in intensity of muscle action. This, however, is not in the least displeasing, but by many of her new acquaintances, is considered an act of

coquetry or affectation, as several have advised her secretly and in all sincerity.

Unfortunately we can only report one case operated, for though there have been many who appeared at the clinic for advice and treatment, in each instance a minimum time of three years had elapsed since the paralysis occurred and we did not believe operation could relieve.

#### *Conclusion*

Operative correction of facial paralysis is a very practical procedure, which can, without great difficulty, be accomplished by nerve anastomosis. Facial paralysis is a common and often unavoidable sequence or complication of many cases of extensive mastoid disease or life-saving radical mastoid operations. It is neither discrediting nor reflecting of the slightest demerit when such paralysis follows surgery of skilled

hands. However it is most unscientific, grossly unfair and surgically unpardonable when the family physician or consulting specialist permit it to exist and go uncorrected until the time limit for repair has passed.

#### DISCUSSION

Dr. C. A. Gardiner (Sunset): Would a year be too long to wait?

Dr. J. T. Nix (closing): No. Two years is too long, but I think a year and a half is within the limits.

I am sorry there was no discussion of this paper. It is not because there are not enough cases of facial paralysis going around Louisiana. I have two slides that show the difference between a patient operated and one not operated. I have seen at least five cases in the last three years showing the most terrible deformity from facial paralysis. I repeat that facial paralysis may occur in the practice of any general practitioner, and it is absolutely unavoidable when it does occur. The operation gives the patient a chance to get well.



EDMOND SOUCHON, M. D.,  
1842-1924

# New Orleans Medical and Surgical Journal

Established 1844

Published by the Louisiana State Medical Society under the jurisdiction of the following-named Journal Committee.

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**SUBSCRIPTION TERMS:** \$2.00 per year in advance, postage paid, for the United States; \$2.50 per year for all foreign countries belonging to the Postal Union.

Material for publication should be received not later than the twentieth of the month preceding publication. Orders for reprints must be sent in duplicate when returning galley proof.

THE JOURNAL does not hold itself responsible for statements made by any contributor.

Communications should be addressed to: New Orleans Medical and Surgical Journal, 1551 Canal Street, New Orleans, La.

## IS LEPROSY CURABLE?

The leprosy problem, like the poor, we still have with us. Medical men generally know little of its early symptoms. Disfigured faces, mutilated hands and feet, loathsome ulcers—these are some of its features familiar to all. That in some cases, however, the symptoms are quite trivial, causing no more inconvenience than a few patches of ring-worm and never develop the disease to sufficient degree to be diagnosed during a life time, is a point which has never been sufficiently stressed.

Muir (1) has recently reported that six hundred cases of leprosy have been observed in Calcutta during the past three and one-half years and of this number he has been able to tabulate accurate data on two hundred and three. Of the latter group forty-three have lost all signs of the disease. According to Muir leprosy is a self-healing disease. When the disease has burned itself out after many years of suffering, the end lesions are generally trophic ones due to fibrous contraction in the nerve

trunks causing destruction of nerve fibres. Such are the cases that crowd the leper asylums and settlements, no longer able to make a livelihood due to their deformities. At this stage careful search will generally fail to detect any lepra bacilli. Recovery of complete sensation under treatment is not always possible for obvious reasons. Muir speaks with enthusiasm of the esters of hydrocarpus, chaulmoogra and other oils in the treatment of these cases. In his series under treatment the proportion is sixteen without active signs to seven with them. He holds that with sufficient vigilance by the medical profession leprosy can be totally eradicated.

## EPONYMS OF DERMATOLOGY

In a review of Herman Goodman's article in the Archives of Dermatology one finds a number of physicians with diseases of the skin named after them, who have been in one way or another associated with American medicine, and more particularly Southern American medicine. We have chosen several excerpts from Goodman's paper with this in view.

*Engman's Disease* (Infectious eczematoid dermatitis.) Martin Feeney Engman was born in New Orleans, La., U. S. A., in 1868. He is a well known dermatologist in St. Louis, where he is clinical professor of dermatology, Washington University Medical School, and Senior Dermatologist to the Barnard Free Skin and Cancer Hospital, which he founded. He is a member of the American Dermatological Association, and was its president, 1919-20. The paper describing the disease which bears his name was, "Derm. infectiosa eczematoides," Amer. Med., 1902: 4,769. Engman also made a report on Lichen planus annularis in the J. Cutan. Dis., 1901: 19,209.

He also made an interesting record of a "Psoriasis Tree," J. Cutan. Dis., 1913: 31,559; as well as a study of "The pathogenesis of placental syphilis," J. A. M. A., 1912: 58, 1415. Many other papers have been published with Mook as co-author. Engman and Mook also have a valuable collection of clinical photographs of dermatologic interest.

*Gilchrist's Disease* (Blastomycosis.)—Thomas Casper Gilchrist was born in England, June 15, 1862. He came to America in 1890. He is a member of the American Dermatological Association, and was its president for 1908-1909. He is professor of dermatology at John Hopkins' University. The disease which bears his name was studied and reported as a "Case of

(1) Muir, E.: Is Leprosy Curable? Indian Med. Gaz., LIX, 297 (June), 1924.



Blastomycetic Dermatitis in Man," John Hopkins' Hospital Reports, 1896: 1,269, 7 plates; *ibid.* 1904: 15, 56; and *Brit. Med. Jour.*, 1602: 2, 1321. The name of *Oidium Gilchrist* has been given to one form of the parasite. Gilchrist has made a study of the *acne bacillus*, *J. H. H. Reports*, 1905: 9,420; the contents of the bullae of pemphigus, *Trans. Am. Derm. Assn.*, 1899: p. 96; study of mast cells, *J. H. H. Bull.*, 1896: 7,140; and the streptococci in the vesicles of impetigo, etc., *Trans. Am. Derm. Assn.*, 1900, p. 87. Gilchrist reported an excess of indican in patients with urticaria, *Am. Derm. Assn.*, 1899. He did some work on *Urticaria factitia*, *J. Cutan. Dis.*, 1908: 23,122. He reported an unusual type of case of Pityriasis rubra followed by peripheral gangrene of the right hand and left foot in the *Brit. Med. Jour.*, for Oct. 6, 1906. In 1920, Gilchrist published a later edition of his "Outline of Common Skin Diseases including Eruptive Fevers."

*Bannister's Disease* (Edema Angioneuroticum.)—Henry Martyn Bannister was born July 25, 1844. He was graduated from the National Medical College of Washington, D. C., in 1871. He was on the Geological Survey of the territories, including Alaska. He practiced in Chicago. He was the first to report angioneurotic edema in the *Jour. Nerv. and Mental Dis.*, 1894: 2; 627-631. Bannister was co-author of a "Practical Manual of Mental Medicine." He was Editor of the *Chicago Journal of Nervous and Mental Diseases*, and a member of the editorial staff of the *Journal of the American Medical Association*. He died May 1, 1920.

*Schenck's Disease* (Sporotrichosis.)—Benjamin R. Schenck reported, "On refractory subcutaneous abscesses caused by a fungus possibly related to sporotrichosis" in the *J. H. H. Bull.*, 1898, 9,286.

*Hyde's Disease* (Prurigo nodularis.)—James Nevins Hyde was born in Norwich, Conn., U. S. A., on June 21, 1840. He studied medicine at College of Physicians and Surgeons, N. Y., and saw service during the Civil War, and later. He was the pioneer dermatologist of Chicago, having begun the practice of the specialty there in 1873. He was a member of many dermatological societies and one of the founders of the American Dermatological Association, and its third president, as well as president in 1896. He was a teacher of no mean ability. He was the author of over 100 special articles. His treatise on *Diseases of the Skin*, 1883, has gone through eight editions.

The condition to which Hyde's name has become attached was first described by Hardaway, *Arch Derm.* 1880: 6,161. Hyde gave the disease its name. For a review of this disease, see Zeisler, *J. Cutan. Dis.* Nov. 1912.

Hyde died on Sept. 6, 1910.

*Grindon's Disease* (Peculiar affection of the hair follicle; Eccholic folliculitis.)—Joseph Grindon was born Aug. 20, 1858. He is a prominent dermatologist and professor of dermatology and syphilology in St. Louis. The disease which he described and to which his name is attached was described in *J. Cutan. Dis.*, 1897: 15,256.

Grindon reported the cutaneous phenomenon of typhoid fever in 1893. He made an admirable study of Recurrent Zoster, *J. Cutan. Dis.*, 1895: 13,191, and 252. Grindon delivered a series of three lectures on medical history from Hippocrates to Harvey in 1907. He published *Manual of Diseases of the Skin*, 1902; and *Cutaneous Therapeutics*, 1907 (with Hardaway).

#### EDMOND SOUCHON

On August 5, 1924, death claimed one of our most beloved and respected confreres, for Edmond Souchon achieved honors as physician, surgeon, medical educator and author. A native of Louisiana, having been born in Opelousas in 1842, he received his medical training in Paris. Shortly after his graduation, J. Marion Sims visited Paris to demonstrate his operation for vesicovaginal fistula, and as Sims could speak no French the honor fell to young Souchon to serve as interpreter. Returning to New Orleans he began to practice medicine and remained actively engaged in professional work for nearly sixty years. In 1872 Dr. Souchon was appointed demonstrator of anatomy at Tulane, becoming professor of anatomy and clinical surgery in 1885. In 1892 he was asked to design the plans and supervise the construction of the Richardson Memorial Building, one of the units of the Tulane Medical School. He served for many years as member of the board of administrators of the Charity Hospital; acted as president of the Louisiana State Board of Health under three governors. In 1908 he retired from his chair in Tulane to devote his full time to the founding of an anatomical museum at Tulane, now known as the Souchon Museum of Anatomy, and without doubt one of the best in the world. Dr. Souchon served as president of the Orleans Parish Medical Society, vice president American Medical Association, vice president Ameri-

can Surgical Association, was a founder of the Southern Surgical and Gynecological Association, and a fellow of the American Society of Anatomists. He served two terms on the board of governors of the Boston Club.

He had the distinction of being elected an honorary fellow of the American College of Surgeons, an eminence accorded to but few. Among the more important contributions to medical literature made by Dr. Souchon might be mentioned his "Philopic Anatomy of the Liver," "Aneurisms of the Arch of the Aorta" and "Plea for Reform in Medical and University Education." His contributions to the literature on anatomy, surgery and sanitation were many. He was inventor of the Souchon anesthetic.

All who knew Edmond Souchon loved him. The thousands of physicians throughout the South, who, at one time sat at his feet, while he imparted to them their knowledge of anatomy or surgery, mourn deeply his loss.

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#### FEE SCHEDULES

The subject of fees! Always interesting. Frequently requests are made by medical societies and individuals, for copies of the fee schedule used by members of the local medical society. Fortunately for the medical profession of New Orleans which serves a city whose population is one third negro, another third dependent on "benefit societies" for medicine and treatment, the Medical Society has never adopted a schedule of fees such as other medical societies in many sections of the country have done. This relates particularly to charges for house calls and office consultations. Many factors influence medical charges; the patient's economic condition is of first importance. On the other hand the physician is entitled to full consideration for his services.

Fees for house calls, as a rule, should be in excess of office charges. Night calls more than day visits. Distance to be traveled, length of time spent at the bedside, character of service rendered, and the type

of case treated, should all be included in determining the charge.

Treatment of infected cases, involving greater responsibility and some personal risk to the attendant should command a larger fee.

Usually the first house visit requires more time than succeeding visits, and charges should be increased accordingly.

Finally the personal qualifications of the physician, his training and experience in dealing with the particular type of case, should merit for him greater compensation. A flexible scale excepting routine work, will meet all conditions, assuring to the patient the fullest and fairest treatment, and to the doctor a competence commensurate with his time, service, and skill. Medical fees should not be standardized, and popular impression to the contrary should be corrected.

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#### WE THANK YOU

The Journal Committee acknowledges, with appreciation, the many complimentary communications and editorials on the recent improvements of the Journal.

For the profession of Louisiana and Mississippi, in the spirit of true fraternalism, we accept with feelings of gratification and pride the words of commendation. We extend the hand of fellowship and ask help as we advance step by step in the footsteps of our fathers and predecessors who have fought the battles of truth against ignorance and superstition.

We wish especially to acknowledge the editorial in the *Texas Journal of Medicine* by our true and loyal friend, Dr. Holman Taylor, Editor-in-Chief.

The Committee felt it timely to broaden the influence and enlarge the scope of the Journal. With the assistance of our Mississippi confreres we now feel that the "rainbow of progress" gives promise of an era bright with the prophecies of grand development in medical research.

"There are great truths that pitch their shining tents  
Outside our walls, and though but dimly seen  
In the gray dawn, they will be manifest  
When the light widens into perfect day."

# TRANSACTIONS OF MISSISSIPPI STATE MEDICAL ASSOCIATION

## *Minutes of the Woman's Auxiliary to the Mississippi State Medical Association 1924*

The first session of the Executive Board of the Woman's Auxiliary to the Mississippi State Medical Association met at the Edwards Hotel, Jackson, Miss., at 2:30 p. m. May 13, 1924. Mrs. D. J. Williams, president, in the chair. The roll call showed four members of the board present. Distinguished visitors present were: Mrs. S. C. Red of Houston, Tex., President of the National Auxiliary to the American Medical Association, and Mrs. Seale Harris of Birmingham, Vice President of the National Auxiliary, and President of the Woman's State Auxiliary to the Alabama State Medical Association.

A motion was made and carried that the incoming president be empowered to appoint for the coming year a corresponding secretary in her own vicinity. It was moved and seconded that Mrs. James M. Acker, Jr., act as recording secretary in the absence of Mrs. T. E. Ross, Jr.

After discussion, it was decided that there should be two kinds of membership, namely the regular and the associate members. In counties where there is no local organization, wives may become State members with all the privileges of the state organization by paying \$1 state dues. These members will be known as associate members and as local organizations are formed in their respective localities, they will be allowed to become regular members by joining the same and paying an additional twenty-five (25) cents, making the total dues for regular members \$1.25. At this point Mrs. S. C. Red and Mrs. Seale Harris gave interesting and instructive talks showing the importance of the Auxiliary and how auxiliary members could work with the Federated Clubs in the state along health lines. Mrs. Red read a report of the Committee on Program and Activities as adopted by the 12th Division Texas Women in 1923.

The Executive Committee then adjourned to meet at 9:30 a. m. Wednesday.

A general meeting was held at 9:30 a. m. May 14, 1924, at the City Auditorium. The meeting was called to order by the president. The Lord's Prayer was repeated as an invocation. The first order of business was the appointing of a nominating committee, consisting of—

Mrs. R. C. Elmore, Durant.  
Mrs. G. W. Robertson, Magnolia.  
Mrs. A. M. Doty, Lexington.  
A Courtesy Committee consisting of—  
Mrs. W. H. Parsons, Vicksburg.  
Mrs. S. H. Hairston, Meridian.  
Mrs. J. M. Acker, Aberdeen.

The report of the President was received and a rising vote of thanks was given Mrs. Williams.

The reports of the Recording Secretary, the Corresponding Secretary and Treasurer were received. The Treasurer's report showed a balance of \$11.25.

Mrs. Hairston reported the organization of the Lauderdale County Auxiliary. Mrs. R. C. Elmore, President of the Homes County Auxiliary, made an interesting report, four members of this organization were present. The report from Harrison-Stone County Auxiliary was read by the President.

Mrs. S. C. Red, President of the Woman's Auxiliary of the American Medical Association gave a talk on the work of the Councilors, and told how to stimulate enthusiasm among members; she gave a very interesting account of the first organization and its growth.

Mrs. Seale Harris gave a report of the organization's work in Alabama.

Four new Councilors were appointed—  
Mrs. W. H. Frizell, Councilor for the 8th District.

Mrs. W. G. Gill, Councilor for the 6th District.

Mrs. E. R. McLean, Councilor for the 1st District.

Mrs. H. F. Garrison, Councilor for 5th District.

Mrs. Williams and Mrs. Harris emphasized the importance of Public Health work to be done by the doctors' wives in connection with Federated club work.

There being no further business the meeting adjourned to meet at 1 p. m. at the Bon Ton Cafe, at which time and place the meeting was called to order by Mrs. S. W. Johnston, Vice President; Mrs. Red and Mrs. Harris were guests of honor.

Mrs. D. J. Williams delivered the President's address, following which Dr. Olin West, Secretary of the American Medical Association, was introduced and made an interesting talk. Mrs. Red was the next speaker and told of the work of the Woman's Auxiliary to the American Medical Association and the plans for the Aux-

iliary meeting at Chicago in June. Mrs. Harris was next introduced and gave an account of the meeting of the Southern Branch of the Auxiliary at Washington, and the plans for the coming meeting of the Southern Branch of the Woman's Auxiliary to be held during the meeting of the Southern Medical Association at New Orleans, La., in November.

The Nominating Committee reported as follows:

Mrs. D. J. Williams, President.

Mrs. S. H. Hairston, First Vice President and President Elect.

Mrs. S. W. Johnston, Second Vice President.

Mrs. J. M. Acker, Jr., Recording Secretary.

Mrs. D. W. McCalip, Treasurer.

There being no other nominations, the above candidates were declared elected.

Delegates to the Auxiliary of the American Medical Association were elected as follows:

Mrs. H. R. Shands, Jackson.

Mrs. E. H. Galloway, Jackson.

Alternates:

Mrs. N. C. Womack, Jackson.

Mrs. N. R. Currie, Jackson.

The Courtesy Committee rendered the following report:

Be it resolved by the Woman's Auxiliary to the Mississippi State Medical Association, that the thanks of the organization are most heartily extended to the ladies of Jackson, and the local Entertainment Committee for their cordial hospitality, and to Mrs. Red, the National President, for her delightful and instructive address and also to Mrs. Seale Harris, for her interest and assistance in perfecting our organization. (Signed) Mrs. W. H. Parsons, Chairman.

Mrs. S. H. Hairston.

Mrs. J. M. Acker, Jr.

There being no other business the Woman's Auxiliary to the Mississippi State Medical Association adjourned to meet in 1925 at Biloxi, Miss.

(Signed) Mrs. James M. Acker, Jr.

Recording Secretary.

Officers for the year 1924-25 are as follows:

President—Mrs. D. J. Williams, Gulfport, Miss.

First Vice President—Mrs. S. H. Hairston, Meridian, Miss.

Second Vice President—Mrs. S. W. Johnston, Vicksburg, Miss.

Recording Secretary—Mrs. J. M. Acker, Jr., Aberdeen, Miss.

Corresponding Secretary—Dr. Margaret Caraway, Gulfport, Miss.

Treasurer—Mrs. W. D. McCalip, Yazoo City, Miss.

#### Councilors

1st District—Mrs. E. R. McLean, Cleveland, Miss.

2nd District—Mrs. B. S. Guyton, Oxford, Miss.

3rd District—.....

4th District—Mrs. T. W. Holmes, Winona, Miss.

5th District—Mrs. H. F. Garrison, Jackson, Miss.

6th District—Mrs. W. G. Gill, Newton, Miss.

7th District—Mrs. R. H. Foster, Laurel, Miss.

8th District—Mrs. W. H. Frizell, Brookhaven, Miss.

9th District—Mrs. S. C. Culpepper, Wiggins, Miss.

Chairman Public Health—Mrs. Henry Boswell, Sanatorium, Miss.

Chairman Program and Activities—Mrs. R. C. Elmore, Durant, Miss.

The following ladies joined the State Auxiliary following the adoption of a motion that any one living in unorganized counties may become a member of the State Auxiliary upon payment of \$1 per year dues—they becoming members of their local organization as soon as an organization is perfected:

Mrs. G. W. Robertson, Magnolia, Miss.

Mrs. W. H. Frizell, Brookhaven, Miss.

Mrs. G. C. Terrell, Prentiss, Miss.

Mrs. W. B. Harrison, Belzoni, Miss.

Mrs. H. G. Williams, Prentiss, Miss.

Mrs. S. W. Johnston, Vicksburg, Miss.

Mrs. H. H. Haralson, Vicksburg, Miss.

Mrs. H. F. Garrison, Jackson, Miss.

Mrs. Henry Boswell, Sanatorium, Miss.

Mrs. Henry Blount, Bassfield, Miss.

Mrs. J. M. Acker, Jr., Aberdeen, Miss.

#### Address of President, Woman's Auxiliary

Mrs. D. J. Williams: In assuming the duties of your State President a year ago,, I felt keenly my inability to carry on—indeed I knew better than any of you that I was in the kindergarten class and it would take application and study to pass that grade in one year.

We all realize, as wives of physicians, that we are overshadowed by husbands who are more or less prominent and active in their communities, and we may have lost our identity to a certain extent. However, I see such wonderful possibilities in this organization that I have, as a whole, endorsed it after becoming more familiar with its aims. Am very sure every woman here will feel the same.

No woman's organization has higher and more altruistic aims than this one. In it we find the incomparable pleasure of helping to carry on the aims of the body of men we have placed on our highest pedestal.

Increased understanding of and sympathy with our husband's work, together with helping to promote acquaintanceship and harmony among doctor's families, is part of the great aim of our organization. As we look to the advancement of health and education, which is the paramount object of the medical profession, we are looking directly into the dynamic powerful forces that rule or ruin our homes.

We, among the enlightened women of our state, do not need to be told of the difference between education and ignorance, and that of health and disease. Women may flatter themselves as organizers, and argue that by working through woman's organizations they get so much more accomplished, and some even say that the creating of a common machine is exasperating, as men are not efficient organizers. But, while we are flattering ourselves, let us be honest and acknowledge that woman's efficiency as an organizer has not resulted in co-ordinating the public activities of men and women. We want to improve human relations, and it can be done only by the co-ordination of men and women in public affairs. Let us not allow our intelligent and public spirited men remain as outsiders to any organization work that we as intelligent and public-spirited women see it our duty and privilege to undertake. It should be the duty of the wife of every member of the Medical Association to carry on the campaign for health and education, whether a member of this organization or not. Not only a duty but a privilege that thousands of women in other organizations are attempting to carry on without the direct support from a body of men such as we will receive, as our men realize more and more that our interests are mutual, and that by organization, we may further these interests to an extent impossible to attain by working individually.

Understanding, co-operation, friendship, unity and harmony will follow quickly upon the heels of co-ordinating common interests. It has been proven that it is a very stupid politician who ignores women's organizations, as men up to the present time have thought of them in terms of mystery, if they thought at all. I have come to feel that there has been an unsuspected weakness in the organizations made up of women when it could remain so long a

mystery. Let us lay our cards on the table, face upward, and say to our men, "Here we are, to help, not only in our homes, but to be used by you to help you, and ourselves socially, morally, mentally and (under our breath) financially." I add financially, not in a mercenary sense, but too often do we come face to face with the financial question—too often are we forced to give up, gracefully, greatly desired and wholly deserved things because of the fact that many of our husbands' patients, indebted to us, are flying about in new cars every year—while we thank fate for our husband's flivver. It's the only source of locomotion we have, some of us, and I say "We" because once in a while it is convenient for him to take us. I believe that the more interest we manifest the more our husbands will be encouraged in making collections, in which as we know some of them to be very lax.

However, let us not pity ourselves as being the slaving, self-sacrificing part of our family, for ten chances to one, the husband and father have had disappointments and sacrifices heaped upon him, that were it not for the optimistic and cheerful word that only you and I can offer, I dare say he would often flounder in a hazy sea of pessimism.

The age has come during our lifetime when women's opinions are sought for. We are no longer embarrassed by being placed in the category of the imbecile or spoiled child, but at times I fear there is a disposition on the part of a body of women to be swayed beyond their best judgment when enthusiasm; or the reverse, dissension arises. While we are not claiming that "our men" never lose their heads, those of us who have "listened in" at men's meetings, have noted with admiration, the usually cool and deliberate discussions without undue demonstration. We are oftentimes prone to speak hastily or discreditably, thereby greatly lessening our power for good at home or abroad. We are by nature conceited enough to hail with a certain degree of elation, the asking of our opinion. We believe that we are naturally endowed with an instinct which acts as a guiding force. By careful and prayerful study of conditions which naturally arise in every home and community, we should be, and are, a potent factor in creating and disposing of every undertaking. Because I believe that every woman is instinctively good, I further believe in her powerful force for good.

It is too often the case that women do not know just how to expedite their affairs

in their homes in order that they may widen the scope of their activities. We have not, modernly speaking, learned to budget our times in such a way that the results are always as we feel they should be, compared with the amount of thought and energy expended. It is, therefore, with concerted action, found only in organized efforts, that the results we are looking forward to may be ours.

Probably a majority of those present are more or less identified with other women's organizations and feel that their time outside of their home is fully taken up. By studying the aims of our organization which is intended to be extended, through the wives of the doctors to the various women's organizations, we will find innumerable phases of club work, especially in health and sanitation, education and child welfare, as correlating nicely with these organizations.

As stated before, let us keep this thought, WE have the guidance and co-operation of the strongest body of men's organization in the state and the nation. I feel we would be unworthy of our position in our communities should we fail to take advantage of this unusual opportunity.

As the center of these two organizations, I would suggest that we stress higher ideals in health and education that within each auxiliary a strong working committee be appointed to co-operate with the board of health and education and the men's and women's clubs of our respective community. We were all pleased with the idealism of the young girls, winning recently, the prizes offered by *The Times-Picayune* the essay on "How the people of the state, through their state and local government, can best help themselves to safer, happier and more prosperous lives." And especially were we impressed with the one whose keynotes were education, under-

standing and co-operation. As mature women and mothers, the duty of furthering the ideals of our children is put squarely up to us. I know you will not be "weighted in the balance and found waiting."

In conclusion, let me urge you not to lose sight of the necessity of social intercourse as so wisely suggested by the organizers of our organization. While some few medical men take time to mingle a bit socially, it has been my observation that, as a whole, they are the most devoted to their profession of any of the professional men. It was through love and a desire to help him that we begun, even before the honeymoon was over, of relieving him of everything we could in order that he might have more time for study and practice. I know scores of doctors' wives who have dangled on the telephone wires for the past fifteen years or more, and if it is suggested that a short vacation be taken by one or both, a wail goes up that it can't be done, and one would think that the whole world depended upon the tired little wife, and equally tired husband, grinding away. Upon the advent of an organization in which both are interested, it seems to me a natural result that that same little wife will tactfully press upon her husband the advantages and pleasures of going together to state or larger medical meetings; especially after there is an auxiliary in their county and the wives have provided a social luncheon, which is very apt to bring that unity and harmony among doctors' families.

So now, at the end of our first year, I feel that we have a much clearer conception of the possibilities of our organization and that by the end of another year we will have increased greatly in membership and understanding, and incidentally increased our husband's confidence in our ability to "put over" the claims of his organization.

## MEDICAL ECONOMICS

*Chas. A. Bahn, M. D., Department Editor.*

The germ of success is not in you if you cannot save a part of your income, paraphrased James J. Hill's reply to a young man who inquired about the essentials of success. Mr. Hill's idea was, of course, that a person who is so little interested in the future as to be unwilling to save a small part of present earnings in order to take advantage of future opportunities and better provide for old age and other future obligations, would probably never grow sufficiently, mentally and financially, to be classed with those who have really gotten the best out of themselves; which is what success means.

Mr. Hill was right. But, as we apply his remark to ourselves the first questions which present themselves, are; how much should I save, and what should I do with this amount, every dollar of which, means doing without something that is wanted or perhaps needed. The cost of living is high, social position must be maintained, obligations must be met, illness or other unexpected cause for expense has diminished my savings, and perhaps my expense will be less and my income greater next year when it will be easier to begin saving. These are a few of the thoughts which have already occurred to you.

They may all be true, but don't forget, that in medical practice income is limited by the amount of service that can be rendered in an hour, and the remuneration obtained therefor; by the number of working hours in a day; by the number of working days in a year; and by the number of working years in a life. On the basis of an eight hour working day with an allowance of twenty-five working days per year for vacation and illness, there are approximately sixteen hundred working hours in a year available for the direct examination and treatment of patients. Based on available information, the average physician receives about forty cents net out of each dollar that he earns. About fifteen per cent of his efforts are devoted to the poor,

to members of the medical nursing, and other professions, and others who obtain his services without charge. Another fifteen per cent of his efforts are charged but not collected. The average cost of medical practice including automobile and other equipment maintenance ownership and depreciation, etc., is about thirty per cent of gross earnings; so that the earned dollar shrinks to a net forty cents.

Assuming that a doctor produces on an average one dollars worth of service hourly, he would produce sixteen hundred dollars worth in a year, as there are sixteen hundred working hours yearly. Of this he would receive net, approximately six hundred dollars, as he receives about forty per cent of every dollar that he earns. Likewise if he produced an average of ten dollars worth of service hourly, his production would be worth sixteen thousand dollars, of which he would receive approximately six thousand dollars net, that is, after all attendant expenses had been paid. The relation between production and net returns is practically the same in medical practice for large and small incomes.

Based on the law of averages, your income will begin to decline before you are fifty-five years of age, which means that unless you have saved enough to largely sustain yourself by that time, that your remaining years will probably be spent in relative poverty. Three thousand dollars per year is not an excessive amount on which to live, yet it represents at 5 1-2 per cent interest approximately fifty-four thousand dollars in savings; which however, means less than a hundred and twenty-five dollars monthly saved over twenty years, if invested and compounded at five and a half per cent.

Do not lose sight of the fact that if you cannot live within your present income, that you will probably do no better if your income were doubled, because your expense would be proportionately increased.

As physicians, our income is derived only from knowledge and service. Unless we accumulate sufficient of a more material

character during our productive years, future comforts will be rather limited when the public have ceased to purchase our services, as ultimately they must.

Let us suppose for the moment that your income was reduced to the point where you had to spend less. You would probably be just as happy as you are today, and as you were before your income reached its present level. Expense is based on an estimate of income and if this estimate is a poor or careless one, as it is apt to be if every available cent is spent without thought of tomorrow, you probably will not get the most happiness directly and indirectly out of your efforts; besides, you will accumulate financial obligations which rapidly increase with time and which must be met by you or your family. In this case, your wife will be deprived of the comforts which she has a right to expect, and your children will be deprived of an education, which means a fair start in the world.

If you save too great a part of your earnings, your growth will be stunted and your development narrowed, while if you save too little, your last years are apt to be spent in the poor house. Between these two extremes there is a fairly broad path in which we should travel.

The statistical information which follows this article is copied from a booklet "The Way To Wealth," and is published by the kind permission of Wm. Compton and Co., of New Orleans. Read this table and then read it again. It will give you an idea of what those who have thought long and carefully on this subject consider the most profitable average distribution of a given income, also the accumulated results of a reasonable saving, if invested and compounded at an accepted rate which involves the maximum safety. The information is based on net income and does not consider gross earnings. The retained copy of your last federal income tax return should afford an accurate idea of your net income. It is possible that the information given in the following table may be advantageously modified to meet your individual case, but probably not.

Unfortunately the average doctor, because of his defective training in economic common sense, partly because of his early financial difficulties, and partly because of the impression that he receives from a few doctors in his community, who are apparently wallowing in the lap of luxury, but who are in reality often living beyond their means; gets the idea that on or about a certain day, glory will infold him, gold will

pour into his lap, and some unseen force will provide for him and his. In reality, this is just the opposite of what usually really happens. The doctor who succeeds in saving enough to take care of himself and his family nearly always does so by regularly laying aside a small part of his earnings, usually dating from the early days of his practice, and by investing this small part regularly, with or without the assistance of others, depending upon his sense of values, his judgment and inclination; and at a rate not exceeding that generally accepted as a fair return for the use of money. That doctor is sure to spend his declining years in comfort, afford his wife and children reasonable comforts in case of death and give his children a reasonable education.

These are all that a doctor has a right to expect from his professional efforts.

The reason that most savings are lost and do not accomplish their purpose is because the saver wants something for nothing, or what is practically the same thing, wants more than the use of his money and the knowledge and effort invested with it, reasonably entitled him. Because of the deprivation which saving represents, it is only natural to want as great a return from our efforts as possible. When this desire for a greater return than the use of our effort and money entitle us, stifles our common sense; We lose sight of the risks involved and speculation supersedes investment. The stage is now set for the high speed salesman, and savings are soon exchanged for glittering promises which, of course, are seldom or never realized. Money has a rent value just as real estate. No one will pay you more for your money than it could be gotten for elsewhere, which in figures generally means not over 6 per cent. Bankers, investment security dealers, and others are professionals in the loaning and investing of money, just as you are a professional in medicine. It would require almost as much effort for you to learn all of the details of their life's work as it would for them to learn yours. These intricate details, however, are seldom necessary where the investor is satisfied with a reasonable return. The correctness of any statement given you about an investment can usually be easily verified by some reputable person in the same line of business, by some disinterested friend of good business judgment, or by your banker. It is far from my opinion that the average banker represents the first and last word of financial acumen, nor that he is a patron saint of doctors, widows, orphans and



others who usually know nothing about looking after their own business affairs, but I do believe that the average banker knows the difference between a good and a bad investment for doctors, widows, orphans, etc., and that it is to his advantage to give you dependable advice.

Having presented a reasonably simple plan by which the average physician can profitably dispose of his income, our next problem is the disposition of that part of income classed as accumulation. This means the amount invested in bonds, stock, home and furnishings, real estate, and anything else, which can be ultimately converted into money, to the extent of its cash value at some future time.

Our objects in saving are usually (1) to establish a fund, the income from which will, at about the age of fifty-five, provide reasonable comfort for our wives and ourselves during the remainder of our lives and which will properly educate our children; (2) to establish a similar fund to provide for those left behind in case of the family bread winner's death; or disability before the saving program is completed. Let us set this sum at \$3,000 per year, which means at 5 1-2 per cent interest, the accumulation of about \$55,000 and sufficient insurance to take its place in case of death or disability prior to the age of about fifty-five.

Compensation laws base their estimates of the value of a human life at between three and four times the individual's net income. According to this estimate, a physician should carry insurance to the extent of between three and four times his average yearly net income.

Owing to the limited space at our disposal in this issue we will be obliged to continue this subject next month.

Inquiries were not answered in this issue because there were none to answer. Within the next month we hope to have more, in which case we will begin this part of the work in the following issue.

We appreciate very much the interest shown in the last instalment, especially in view of its puzzling presentation. The printer apparently thought it would be more easily digested if chopped into small pieces.

Again we say this is your page, conducted to help you as you want to be helped. We want you to feel that we are interested in receiving inquiries or problems which relate to more and better medical service to the public, and the greatest practical benefit to the doctor for the effort expended.

Address communications to Dr. Chas. A. Bahn, 1551 Canal street, New Orleans, La.

NET INCOME BUDGET PLAN

Income	ACCUMULATION			LIVING EXPENSES					WELFARE	
	Insurance	Investment	Speculative Fund	%	Food	Shelter	Clothes	Operating Maintenance	Education	Recreation
\$ 2,500	10	\$ 150	\$ 0	78	\$ 650	\$ 540	\$ 400	\$ 360	12	\$ 300
3,000	15	225	0	71	700	600	425	400	14	425
3,500	15	250	0	71	750	650	525	550	14	500
4,000	15	275	0	70	850	720	600	650	15	580
5,000	20	400	0	65	875	840	675	860	15	750
7,500	27	600	400	57	1,200	1,200	800	1,100	16	1,200
*10,000	30	900	600	54	1,300	1,400	1,000	1,700	16	1,600
*12,000	42	1,000	1,000	42	1,300	1,400	1,000	1,800	16	2,000
*15,000	47	1,500	1,400	38	1,400	1,500	1,000	1,800	15	2,200
*20,000	50	1,700	3,300	35	2,000	1,800	1,200	2,000	15	3,000
*25,000	50	1,800	4,000	35	2,300	2,200	1,400	2,800	15	3,800
*30,000	50	1,900	5,600	34	2,500	2,500	1,500	3,500	16	5,000
*40,000	50	2,000	10,000	30	2,800	3,000	2,000	4,200	20	8,000
*50,000	50	2,500	12,500	28	3,000	3,600	2,400	5,000	22	11,000

\*Net after Federal Income Tax.

Working Plan used by permission of the Babson Statistical Organization.

INVESTMENT CHART

Showing how large a fortune is accumulated in any given number of years by investing each six months, at 5 1/2 %, HALF the sum indicated for ANNUAL investment, for any specific income, under Investment column of Working Plan.

	10 Years	15 Years	20 Years	25 Years	30 Years	35 Years
\$ 1,345.89	\$ 2,347.56	\$ 3,661.40	\$ 5,384.70	\$ 7,645.07	\$ 10,609.88	\$ 14,676.04
3,028.25	5,282.01	8,238.15	12,115.57	17,201.41	23,872.24	32,872.24
3,701.20	6,455.79	10,068.85	14,807.93	21,023.94	29,177.18	39,482.12
4,374.14	7,629.57	11,899.55	17,500.28	24,846.48	34,822.12	47,822.12
8,075.34	14,195.36	21,968.40	32,308.20	45,870.42	63,659.15	87,659.15
13,458.92	23,475.60	36,609.01	53,847.01	76,450.69	106,098.84	144,098.84
20,188.38	35,213.40	54,921.02	80,770.51	114,676.04	159,148.26	216,148.26
40,376.76	70,426.80	109,842.03	161,541.02	229,352.08	318,296.52	434,296.52
56,527.44	98,597.54	153,778.84	226,157.44	321,092.91	445,615.13	603,615.13
67,294.60	117,378.00	183,070.05	269,235.05	382,253.45	530,494.20	725,494.20
90,174.73	157,286.55	245,313.80	360,774.97	512,219.66	707,862.23	971,862.23
1,094,186	176,067.00	274,605.08	403,852.50	573,380.20	795,741.30	1,094,186.00
134,589.20	234,756.00	366,090.10	538,470.10	764,506.90	1,060,988.40	1,440,988.40
168,236.44	293,445.06	457,675.13	673,087.63	955,633.70	1,326,235.57	1,826,235.57

## NEWS AND COMMENT

*Lucien A. Ledoux, M. D., Department Editor*

"Every man owes some of his time to the upbuilding of the profession to which he belongs."—(Theodore Roosevelt)

*Bulletin of the Shreveport Medical Society,  
July, 1924.*

July Scientific program by Tri-State Clinic. August: Social meeting, no scientific program.

July Subject: The Female Pelvis.

Surgery of the Tubes and Ovaries, Dr. L. H. Pirkle.

Caesarian Section, Dr. T. E. Williams.

Female Pelvis from a Urological Standpoint, Dr. E. W. Harris.

Extra-Pelvis Symtoms due to Pelvis Pathology, Dr. H. L. Green.

Toxemias of Pregnancy, Dr. W. B. Heidorn.

Ectopic Gestation, Dr. S. W. Boyce.

The above papers will be limited to ten minutes with discussions limited to five minutes.

Charity Hospital, June 3, 1924.

The Shreveport Medical Society was called to order by acting president I. Henry Smith at 8:15 P. M. Minutes of last meeting were read and approved.

Dr. Spencer reported \$150.40 in the bank and one hundred members as having paid 1924 dues. Inasmuch as he is leaving the city, Dr. Spencer offered his resignation as treasurer. With considerable regret the Society accepted Dr. Spencer's resignation. There were no committee reports.

Scientific Program.

This part of the program was put on by the Ouachita Parish Medical Society.

Dr. J. B. Vaughn talked about Hypertension. Discussion by Drs. Herold, Knighton, Lloyd, Bodenheimer, Boaz, R. C. Young, Sanderson and closed by Dr. Vaughn.

Dr. George Wright talked about Acute Hematogenous Osteomyelitis: Discussion by Drs. Spencer, Caldwell, Abramson and closed by Dr. Wright.

These subjects were interesting and well presented and called forth lively discussion.

After a business session the Society was adjourned, Refreshments to follow.

*R. T. Lucas,*

Secretary-Treasurer.

*Louisiana Railway Surgeons*

There will be a meeting of the Louisiana Railway Surgeons Association in Alexandria, on September 13th. You are urgently

requested to attend, as matters of vital interest to the organization will be considered.

*Lafourche Valley Medical Society*

Lafourche Valley Medical Society will have its regular meeting on August 13th, 1924, 6:00 P. M. Dr. S. M. D. Clark, surgeon of New Orleans, and also member of the Lafourche Valley Society will read papers.

*Third Congressional District*

The Third Congressional District Medical Society had a wonderful meeting in Patterson, La., on July 22nd. Drs. Eshleman and McIlhenny of New Orleans gave interesting scientific talks, and the discussions were interesting. An enjoyable boat ride on Grand Lake with Spaghetti supper served while out on the lake were the features of a wonderful day.

*F. T. Gouaux,  
Councilor.*

*St. Tammany Parish Medical Society*

The St. Tammany Parish Medical Society held its regular monthly meeting on Friday, June 13th, at Mandeville.

The meeting resulted in a round table talk with the following results:

Interesting discussion of the Eruptive Fevers, led by Dr. J. F. Buquoi; condemnation of some of the present-day methods of the Louisiana State Board of Health; Memorializing Governor Fuqua to keep politics out of the state medical institutions, with special reference to the state institutions for mental diseases, and strongly recommending and endorsing Dr. Evans, that present very efficient medical superintendent, for retention or reappointment; opposition to the "Chiropractic" bill now before the Legislature, as vicious and a menace to an unsuspecting and gullible public, and petitioning our State Senator and Representative to work and vote against it.

*Tangipahoa Medical Society*

The meeting of the Tangipahoa Medical Society was held at the home of Dr. E. M. Robards, Monday night with 23 doctors present.

The large spacious porch of the doctor's residence was used for the business meeting, which was addressed by Dr. Glen Smith

of Amite, and Dr. A. W. Shaw of the United States Malaria Control Department.

At the conclusion of the business meeting, the visiting medical men were ushered into the large dining room of Dr. Robards' residence, where dinner was served.

The home had been artistically decorated for the occasion. Among those present were Doctors J. E. Kennon, Kentwood; Isham, Roseland; Glen J. Smith, J. H. Beaty, Alfred L. Lewis, T. C. Lewis, Amite; L. L. Ricks, R. W. Travis, W. T. Newman, Anderson, Independence; Rex Singletary, S. S. Anderson, Eddie McGhee, J. A. Newman, Newsom, Hammond; J. A. Thames, Natalbany; W. G. Bowman, E. J. Kevlin, F. D. Travis, A. M. Robards and Mr. L. E. Carruth, Ponchatoula.

#### *Washington Parish Medical Society*

June 26th, -1924, the Washington Parish Medical Society held its regular monthly session at the Pine Tree Inn, Bogalusa, La. Luncheon was served at 8:00 P. M., and after luncheon the regular program was taken up.

Program.

Ileo Colitis, by Dr. Chas. J. Bloom, New Orleans.

After the reading of this paper, there was an "hour of questioning," round table discussion.

#### *Louisiana Helps Mothers and Babies*

Louisiana has just decided to accept the provisions of the Federal Maternity and Infancy Act, bringing the total of States Cooperating with the National Government in work for mothers and babies to 41. Louisiana has never before accepted the provisions of the act. In 1922 the State legislature met and failed to accept. In 1923 the State Senate agreed but the House refused.

Married: Doctor Fayette Clay Ewing to Rowena Annette Clark, on Saturday, the second of August, 1924, in Princeton, Illinois.

Returned and resumed practice: Dr. Edmond L. Faust, 2708 Octavia Street; office, 427 Physicians & Surgeons Building.

#### *Removals*

Dr. B. C. Fry, from Jennings, Louisiana, to 616 Baker Avenue, Bell, California.

Drs. Herold, Dickson, and Sentell, from First National Bank Building, Shreveport, to New North Louisiana Sanitarium, Shreveport, La.

Drs. Rougon, Stamper, Paine, and R. C. Young to the Ricou-Brewster Building, Shreveport, La.

#### *Campaign Against Rickets*

Codliver oil was found helpful in preventing rickets among Italian babies of the Mulberry district in New York City. In this district the city bureau of child hygiene and the Association for Improving the Condition of the Poor, found that fully one-fourth of the children of preschool age were suffering orthopedic defects, due largely to rickets in babyhood. One hundred and fifty babies between three and nine months old were brought to a clinic and given follow-up care by its nurses. An effort was made to see that these babies received cod liver oil regularly during a period of four months. At the end of the experiment, it was found that 71 percent of the babies who took the oil regularly showed no signs of rickets, whereas only 30 per cent of the babies who did not receive the oil were free from the disease.

Wisconsin was admitted to the United States birth registration area in 1918. This year the United States Bureau of the Census has, for the first time, checked up Wisconsin's accuracy, and found that Wisconsin is registering 83.4 percent of all her babies. The requirement for admission to the birth registration area is a 90 percent perfect record.

The creation of a Medical Corps within the U. S. Veterans Bureau, through an Act of Congress, was recommended to Director Frank T. Hines, today, by the Medical Council in session at the Veterans Bureau.

This step was taken because of a belief that a permanent qualified personnel is highly essential to the best operation of the Bureau. The formation of a Medical Corps would give security of position to the doctors and assurance of permanent personnel to the Bureau.

The occurrence of 4 cases of abortion complicated by hemolytic streptocemia with recovery under the use of Antistreptococcic Serum on the Gynecologic service of the Presbyterian Hospital, Philadelphia during the past year, seemed of sufficient interest to warrant reporting them.

Faulty lighting and poor eyesight "are today the major factors in one out of every eight accidents," it is asserted by R. E. Simpson, engineer of the Travelers Insur-

ance Company, Hartford, Conn., in a report to the Eye Sight Conservation Council of America, which is carrying on a nationwide campaign for better vision in education and industry. Fully 66 percent of American workers have defects of vision, according to the report.

The Tuberculosis and Public Health Association of Louisiana adopted its charter and perfected its organization on July 23rd.

This organization owes its existence to the efforts of Dr. C. V. Unsworth, the president of the Louisiana State Medical Society and the Executive Committee, which endorsed the work. Dr. W. H. Seemann is president of the new organization.

The intent of the organizers is that this association should fulfill a function in promoting general health, centralizing their efforts in the beginning principally on tuberculosis.

It is the idea to work in close co-operation with the Louisiana State Medical Society and the constituted authorities, and it is felt that this association can be of tremendous benefit to organized medicine on account of the opportunity afforded through it to bring to the public correct views about medical and health matters.

#### *The Price Reductions on Iletin (Insulin, Lilly)*

In May, 1922 when Eli Lilly and Company were accorded the privilege of co-operating with the Insulin Committee of the University of Toronto, in developing processes for refining and manufacturing Insulin on a large scale, they had constantly in view the desirability of ultimately placing it in the hands of the physician at one cent per unit.

August 6, 1922 Eli Lilly and Company commenced to supply Iletin (Insulin, Lilly)

to a few leading specialists selected by the Insulin Committee of the University of Toronto, for experimental work. Soon they were furnishing large quantities without cost to clinicians and investigators. January 19, 1923 they began to sell limited quantities at 5 cents per unit to physicians. Since that time the need for costly experimental work has diminished. Substantial savings also have been effected in other ways.

Within the period of these reductions, the strength of the unit of Iletin (Insulin, Lilly) has been increased approximately forty percent. Taking this into account, Iletin now costs the physician only about one seventh as much as originally.

In some districts of the Belgian Congo there are more deaths than births, and in some places in this territory one-half of the children die before they reach the age of two. Reports indicating conditions such as these have led the National Children's Bureau of Belgium to appropriate, for the first time, 50,000 francs for a campaign against infant mortality in the Congo.

#### *Publications Received*

P. Blakiston's Son & Co., Philadelphia: "Toxicology or the Effects of Poisons," by Frank P. Underhill, Ph. D.

William Wood and Company, New York: "Diseases of the Eye," by Charles H. May, M. D.

Columbia University Press: "Mind and Medicine," by Thomas W. Salmon, M. D.

Government Printing Office, Washington: The Medical Department of the United States Army in the World War. Vol. XI, Surgery. Part two.

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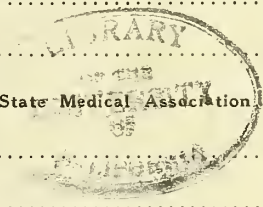
\$2.00 per Annum, 25c per Copy  
Volume 77, Number 4

OCTOBER, 1924

Published Monthly in New Orleans  
at 1551 Canal Street

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Next Annual Meeting Louisiana State Medical Society, New Orleans, April 21-23, 1925  
Next Annual Meeting Mississippi State Medical Association, Biloxi, May 12-14, 1925  
Next Annual Meeting Southern Medical Association, New Orleans, Nov. 24-27, 1924

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# New Orleans Medical and Surgical Journal

Vol. 77

OCTOBER, 1924

No. 4

## SURGERY OF THE THYROID.\*

W. H. PARSONS, M.D.  
VICKSBURG, MISS.

Goitre may be defined as an enlargement of the thyroid gland. Plummer, some years ago, proved conclusively that there were but three types of goitre, namely: (1) colloid, (2) adenoma, (3) true exophthalmic. The second named of this group, the adenomata, may and probably will in the course of time, become associated with hyperthyroidism, but the resultant combination of an adenoma with hyperthyroidism is a separate entity from true exophthalmic goitre from which it can be differentiated, both clinically and histologically. Malignant conditions of the thyroid might be classified as a fourth type. With this form of goitre I shall not deal. This classification of Plummer's by its clarity and accuracy does much to clear up the confusion of ideas prevalent as to the types of thyroid enlargements. Plummer and Wilson have clearly demonstrated that all goitres are one of the varieties named or a combination of these types.

Goitre occurs in all parts of the world, although now, as there have always been, there are certain areas, notably Switzerland and the region of the Great Lakes in America, where the disease is more commonly encountered. Whether the disease is actually on the increase cannot positively be stated, certainly many times the number of cases come to operation today than did formerly. But this increase can be explained, at least in part, by the fact that more accurate diagnoses are now made, and to the elimination to a considerable extent of the old vicious circle of late operation with high mortality and high mortality with late operation. The brilliant results that have been obtained by surgical treatment during the past decade now cause

patients to turn earlier to surgery as a means of relief. Gamble, in a paper presented before this association at its previous meeting, stated that the disease is encountered more often in certain areas of Mississippi than in others. He finds that the disease is endemic in the area beginning on the north at Tunica county and embodying what is known as the Yazoo Mississippi Delta, comprising the counties of Tunica, Bolivar, Quitman, Sunflower, Leflore, Coahoma, Holmes, Washington and Sharkey. Other counties which show a higher incidence are located upon the larger streams. My personal feeling is that goitre is more common in this state than ordinarily is believed. I believe that even today a good many cases of hyperthyroidism are masquerading under the false diagnosis of pulmonary tuberculosis, nervous breakdown, etc.

The negro is ordinarily held to be more or less immune to goitre. Such has not been our experience, and while the type usually noted is the adenoma of the thyroid, violently toxic exophthalmic cases have been encountered in our series. In this respect our experience has been similar to Gamble's. Of my cases, 31 per cent were found in negroes.

In Vicksburg the usual types of goitre is the adenoma or adenoma with hyperthyroidism. Of my cases, 9 per cent were pure adenomas and 56 per cent adenomata with hyperthyroidism. A large percentage of these cases of adenoma, after existing for years, come into the group of adenoma with hyperthyroidism. The adenoma is the type of goitre which generally begins in the earlier years of adult life, later to become associated with hyperthyroidism. At the Mayo Clinic the average number of years that an adenoma was present before toxic symptoms occurred was sixteen. This is about the usual time noted in all the larger clinics, as well as in the smaller centers. The exophthalmic is not the common type

\*Read before the Mississippi State Medical Association.

of goitre. It may be acute or remittent. It has formed 18 per cent of my own cases. Exophthalmic goitre, in contradistinction to the adenoma of the thyroid, does not usually run over a period of years. Ordinarily it develops at a more advanced age, generally in the third or fourth decades of life. It is by far the most violent type of goitre. Generally crises occur within the first twelve months of the disease. It is extremely toxic and it affects violently the nervous system of its victim. It is the adenoma of the thyroid which spreads over a long space of time and which damages to such a degree the cardiovascular system, and it is in these patients that we find such marked myocardial weakness with all that goes with this condition.

The actual cause of goitre has yet to be found. A great variety of causative agents has been suggested, none have been proved. Most of the theories advanced fall in one of the following groups, as enumerated by D'Quervain:

(1) Earth and water theory which attributes goitre to some organic or inorganic chemical substance which the water derives from the soil through which it percolates. This view had as one of its exponents no less a person than Kocher.

(2) Toxic infective theory which was supported by McCarrison and which holds that the thyroid dysfunction is due to a specific infective agent or a specific intestinal flora.

(3) Theory of absence of iodine from the food. Certain features of this theory appear strong. Marine holds that goitre is simply a deficiency disease.

(4) Multiple causation in relation to general hygiene.

Each of the above theories has enjoyed the support of illustrious authorities, but a single specific cause of goitre has not been demonstrated. It may be that different causes exist to account for different pathologic conditions of the thyroid. We must bear in mind, as D'Quervain points out, that "the term goitre merely expresses under one designation the various modes of reaction of the thyroid gland." It is possible that the different pathological conditions of the thyroid, which naturally result in different clinical pictures, may be due to different causes.

D'Quervain considers that it is doubtful whether infections in distant areas affect the thyroid gland. He cites the case of a young woman who was slightly hyperthyroidic and who died after her sixth "focal" operation, because the surgeon's curette en-

tered the meninges during the curetting of the ethmoid cells. This instance, to me, demonstrates nothing other than an error of surgical technic. The writer has never had a case of goitre in a person whose tonsils had been removed prior to the onset of the goitre. Of thirty-three cases of goitre examined since first having had my interest directed to this phase of the subject, twenty-seven, or 84 per cent, had definitely diseased tonsils and in one or two others there was possibly tonsillar infection. The following abstracts from cases in this series are of interest:

W. F., 30. Has had attacks of tonsillitis since childhood. For past few years has been inclined to nervousness and palpitation of the heart, both of which conditions have been more marked since an abortion about eight months ago. Has had enlargement of the neck for several years. Examination showed large, chronically inflamed tonsils, a moderately enlarged thyroid with other evidence of thyrotoxicosis. The thyroid was resected, about 50 per cent relief followed. Six months later the tonsils were removed and practically immediate and complete cure followed.

C. F., 26. Adenoma thyroid with hyperthyroidism. The tonsils were large and quite markedly diseased. Thyroidectomy followed by gain in weight of ten pounds, and some lowering of pulse rate, but in general not more than 33 1-3 per cent relief. Tonsillectomy was refused.

W. F., 38. Large adenoma thyroid with hyperthyroidism. The tonsils were large and chronically inflamed with a history of repeated attacks of tonsillitis. At the time of the tonsillitis the symptoms of thyroid disorder would grow worse. The thyroid was resected with about 70 per cent relief.

W. M. Adenoma thyroid with distinct hyperthyroidism. Tonsils large and chronically inflamed. Their removal resulted within three months in a reduction in size of the goitre of about 50 per cent and 70 per cent relief of symptoms of hyperthyroidism.

W. F., 30. Adenomatosis of thyroid with hyperthyroidism. The cardio vascular system had been considerably damaged. The tonsils were removed with partial relief. Four months later the thyroid was resected. The patient's condition steadily improved except for the irreparable cardiac damage.

Stucky states that he has not had more than a dozen cases of goitre which were not relieved by tonsillectomy, and that he has had many more which were. Kimbal in discussing the prevention of goitre in school children by the administration of iodine, found that of the children so treated but five developed goitre, and of these five in two, or 40 per cent, the tonsils were markedly enlarged and hyperaemic, and subject to recurrent attacks of tonsillitis. One was found to have congenital syphilis, in one no explanation could be advanced and one could not be traced for re-examination.

It is the history of medicine that as a rule after many years or even generations

of complicated explanations, in time some simple and true cause actually will be found. When one reflects upon the enormous volume of literature that has been written with focal infections furnishing the text, it is remarkable that enlargements and dysfunctions of the thyroid have received such scant notice in this connection. Pus in the tonsils, the teeth, sinuses, etc., has been accused of causing well nigh every ailment that man is subject to, yet the literature holds comparatively little suggesting that diseases of the thyroid may be due to these focal infections. Barach found, in twenty-five cases, a definite syndrome indicating thyroid dysfunction, which was evidently the result of chronic infection of the tonsils. These cases occurred in females, ranging in age from fifteen to thirty-five. Each case had suffered repeated attacks of acute tonsillitis and there was present in each case a goitre of colloid type with symptoms of hypothyroidism. The attacks of tonsillitis antedated in each case the development of the goitre. If the theory that colloid goitre is due to lack of iodine is correct it suggests the possibility that chronic tonsillitis deprives the system of iodine. Reede has cited a case in which goitre symptoms were relieved by removal of two abscessed teeth.

The diagnosis is not usually difficult. The old classical signs and symptoms do not need repetition. The use of the adrenalin test of Goetsch is not to be recommended, it is untrustworthy, according to Pemberton, in 20 per cent of the cases.

Mayo has stated that he has obtained a considerable number of reactions to Goetsch test in cases of nervous instability. There is one test which has developed in the past few years which is of great value, namely the determination of the basal metabolic rate. Boothby and Sandiford, who have had probably the widest experience in this line of work of any observers, have proved beyond doubt that they can accurately determine the degree to which the thyroid is functioning and a knowledge of this rate is essential to a thoroughly accurate diagnosis of any thyroid disorder. The determination of the rate will give specific information relative to the degree of function of the thyroid at the particular time the test is made. The basal metabolic rate gives an "accurate mathematical index of the degree of functional activity of the thyroid." It will not give information relative to the amount of damage which has already occurred to the organism. That must be

determined by the physician through clinical means.

Colloid goitre is that type which occurs in early life, the so-called "adolescent goitre" is of this group. It composed 16 per cent of my cases. It is not associated with hyperthyroidism, and the basal metabolic rate is not increased, but is normal or below normal. In this type of goitre the enlargement is symmetric and the tumor soft in consistency. Adenoma of the thyroid occurs usually at a little later age. The enlargement is more asymmetric and has not the soft consistency of the colloid. This is the form of goitre which may become enormous. Simple adenoma without hyperthyroidism will not cause an increase of the basal metabolic rate. When in after years, as is usually the case, hyperthyroidism begins to occur, the basal metabolic rate will be proportionably increased, but it does not as a rule reach the height attained in exophthalmic goitre. In exophthalmic goitre the thyroid is usually, but not always, enlarged. It is generally noted in the third or fourth decades of life; it is accompanied by the classical signs of goitre, that is tremor, exophthalmos, tachycardia, etc. The disease usually affects the nervous system most profoundly. There are periods of exacerbation and during these crises the patient is very sick. It is this type which gives the very highest metabolic rate.

The treatment of goitre is both medical and surgical. Sistrunk in a concise and admirable paper outlined the treatment as follows: (1) Colloid should not be operated upon, it is amenable to medical treatment. The use of thyroxin, for the isolation of which Kendal is due credit, will cure these cases. Removal of the thyroid unless followed by administration of some iodine preparation will probably not cure the case and removal of the thyroid at the age at which this type of goitre occurs is not good surgery and should not be done. Where an adenoma of the thyroid occurs in a person less than thirty years of age, and is not causing pressure symptoms, and is not associated with hyperthyroidism, it should not be operated upon, because of the fact that the thyroid is of great value to the body economy at this age. If it is accompanied by pressure symptoms or by hyperthyroidism it must of course be removed. After thirty years of age it is advisable in any case to remove it because it is this type of goitre which will probably become associated with hyperthyroidism in later years. And this constant hyperthyroid condition

through the years will finally wreck the vital organs. The exophthalmic goitre should be operated upon regardless of the truth that very occasionally a case of this type may go on to recovery without operation. This is not by any means the rule and medical treatment in this condition is not comparable to surgical intervention and is accompanied by a grave risk and responsibility. The medical treatment aside from the administration of iodine, or its products, in the colloid type, consists in rest, the application of ice caps over the heart, digitalis if indicated and a plain simple diet.

Cases should be carefully prepared for operation. In addition to the above the use of iodine is of greatest value. Compound solution of iodine (Lugol's solution), fifteen to thirty minims daily, will usually cause rapid and decided amelioration of the nervous symptoms with a drop in the basal metabolic rate and a general improvement of the patient.

All cases should be laryngoscoped before operation. In a series of 1,000 cases of D'Quervain's, thirty-one were shown to have paralyses of one recurrent laryngeal nerve prior to operation. Very valuable information may be obtained by making use of this routine examination. One of the authors' cases developed postoperative obstructive dyspnoea. This case had not been laryngoscoped prior to operation. I therefore felt forced to accept the responsibility of the bilateral lesion.

The results obtained from treatment of goitre by means of the X-ray and radium have not equaled those obtained through surgery. In general the disadvantages of radium and X-ray therapy in goitre are: (1) It is difficult to regulate the dosage. (2) Burns may and have occurred. (3) The rays show their destructive effect slowly and their action is cumulative. (4) Myxoedema may result. (5) Acute exacerbation may result. (6) Relapse after apparent or real improvement is common. (7) Subsequent surgery is seriously hampered.

In some cases the type of operation to be done requires very expert judgment and it is this judgment which frequently will determine the difference between life and death. Cases of simple adenoma without hyperthyroidism should withstand thyroidectomy. Where there is any doubt it is safer to inject plain boiling water or novocain and be guided in future steps by the amount of reaction following. Thyroidectomy, or any other surgical procedure,

should not be performed upon a patient going through a crisis. This class of patient should receive medical treatment until a more favorable time, when injection of boiling water and then ligation should be performed, to be followed a few months later by more radical operation.

Thyroidectomy cannot be safely performed when the basal metabolic rate is rising. The administration of fluids is of great value in the pre-operative treatment. Purges should not be given or an intractable diarrhoea may follow. Ether is generally the anesthetic of choice, or a combination of local anesthesia with gasoxygen. The Kocher incision is generally employed. A good exposure of the field is obtained by as large an incision as necessary and as much muscle is divided as is necessary. In large goitres causing pressure on the trachea, Balfour recommends primary division of the isthmus and outward enucleation of the lobes. Proper ligation of the superior thyroid has been stressed. If the posterior capsule and as much of the posterior gland as necessary is left there is little danger of injuring the recurrent laryngeal nerves and para-thyroid bodies.

Pemberton points out that in a large goitre the nerve may be postero mesial to the lobe rather than in the anatomically normal posterior position. It is advisable in such cases that along the mesial surface of the lobe points of forceps should not be placed posterior to the frontal plane of the anterior border of the trachea. Forceps should never be applied indiscriminately, it is by such hasty application that damage is generally done to the nerves. In a case in extremis Graham has developed what he terms an emergency operation. In this no attempt is made to close the wound, but it is left wide open for a later day. It is the consensus of opinion that these wounds should be drained, certainly the toxic cases should be and must be, and drained as thoroughly as any septic wound. If the muscle is sectioned at a higher level than the skin and the tissues later are neatly approximated there is little scar. After operation the patient should receive fluids. If much redness and swelling of the wound occur a pack of glycerine soaked gauze may be applied.

The prognosis of goitre depends largely upon the type of goitre, upon the time it comes to operation and upon the judgment of the man operating. In exophthalmic goitre there is a mortality ranging up to 4 per cent. Good judgment in selecting a time of operation and the type of operation

give a lower mortality. Following a successful operation the results obtained are satisfactory.

#### DISCUSSION

Dr. W. W. Crawford (Hattiesburg): I want to commend Dr. Parsons for this very excellent paper. I almost imagined I was sitting in a staff meeting at Rochester when I heard him give the subject matter contained in his paper—so well balanced and thorough.

Of course in Mississippi we do not have as many cases of goitre to contend with as they do in some other States. In some of the Swiss cities over 25 per cent of a doctor's patients have goitre, and when you walk down the streets of Rochester you think it is almost as bad. Of course they are not all inhabitants of that State.

I do not wish to take time to discuss this paper, for two reasons; first, because I can not add much to the subject, and, second, because we have with us Dr. Sistrunk, whose treatment has been quoted by the essayist, and I would like to hear him at this time.

Dr. W. E. Sistrunk (Mayo Clinic): I have enjoyed listening to Dr. Parson's paper very much, and he has covered the subject so well that there is little I can add, so I will confine my remarks to some recent changes we have made in dealing with exophthalmic goitre cases—some changes that are a very decided advantage in this work.

During the last two years Dr. Plummer has been able to prove almost conclusively that we have reduced our mortality considerably in dealing with exophthalmic goitre by preparing these patients with iodine, and by the use of iodine we have been able to almost completely rule out post-operative hyperthyroidism. Not only that, but through this means of preparation we have been able to do primary thyroidectomies very much oftener than before. It is difficult to know just exactly how iodine benefits the patient. We have theories regarding it which we think are fairly accurate. For instance, when a patient develops exophthalmic goitre something is thrown on the thyroid gland which causes this great hypertrophy and increase in secretion. The thyroid secretion in a normal individual has this active principle of thyrotoxin, and the base of thyrotoxin is iodine. We feel that when a patient develops exophthalmic goitre he has used up the iodine in his system and really needs more iodine for the work his thyroid is called upon to do, and because of his inability to obtain this there is produced the thyroid crisis which we see. If we take a normal patient and feed him thyroid extract we can produce many of the symptoms of hyperthyroidism—loss of weight, rapid pulse, sweating, and many of the nervous symptoms—but we cannot produce true exophthalmic goitre, we cannot produce the crisis, for we cannot produce the exophthalmos. We feel that when patients suffering from active hyperthyroidism due to exophthalmic goitre are given iodine, it supplies the base the thyroid needs to allow it to make true thyroidization, and we want to bring the patient back to the state he would be in with the administration of large doses of thyroid extract.

It has been very interesting, indeed, to note the great time and the great degeneration of vital organs which is saved by being able to do primary thyroidectomy. We have realized for a long time that the best results were obtained on patients operated very early, because the damage

was so slight that operation could be done more safely; but on account of inability to judge certain people it was necessary in many of these cases to do some preliminary operation in order to prepare them for the thyroidectomy. Before we used iodine when people came in crisis it often required weeks of treatment before we could do anything in a surgical way. Then we very cautiously injected hot water, or possibly did a ligation, in order to allow them to gain in weight. This weight gain occurred after two or three months, and many people who came back after having two ligations would be fifteen or twenty pounds heavier. Their metabolic rate would have changed very little, but on account of this gain in weight we were able to go in and do a thyroidectomy. However, some people who had ligations came back with evidence of very great damage which had occurred after two or three months. A great many people coming to the Clinic would be extremely sick and it was not an uncommon thing to have patients die within a day or two after admission. Now we realize that the sicker these people are and the nearer the crisis, the more likely they are to improve under Lugol's solution of iodine, and it is not uncommon now to see patients come in in extreme crisis, given one dram, or a half dram a day, and in two or three days the metabolic rate dropped considerably and they are entirely different so far as nervous symptoms are concerned. Many of these people after ten days' preparation, even though they were in crisis, will be in such condition that it is possible to do a primary thyroidectomy with no hyperthyroidism following operation. We feel that this has been of great importance in an economic way for the patients, and also in diminishing the degenerative changes that occur during the two or three months of active hyperthyroidism. Of course the metabolic rate is a great index as to the degree of hyperthyroidism and we use it a great deal in exophthalmic goitre. It is one of the best means we have of determining the amount of improvement that the patient is making when being prepared with Lugol's solution, and when we find a patient has improvement of nervous symptoms, when the pulse rate drops, when the weight loss stops, and especially when there is a gain in weight, then we can consider primary thyroidectomy.

After thyroidectomy is done these people are tested again to ascertain if enough thyroid tissue has been removed, and if the rate is normal after three weeks we leave them alone; but if the rate is too high we feel that we have not removed enough tissue. And so Lugol's solution is a great help. It is not an uncommon thing to see a patient whose rate at first was 20 to 30 above normal, following the thyroidectomy to have the rate drop after a short treatment with the Lugol solution.

After we have made every effort in selecting our patients by preparing them as I have indicated, we have something else to deal with, and that is the surgical mortality. Of course the immediate surgical mortality on the operating table does not amount to much; but we cannot help feeling that postoperative complications are responsible for about 50 per cent of deaths—in patients properly prepared for operation. Those accidents which come after operation may be looked upon as falling into four groups—dyspnoea following operation; secondary hemorrhage; acute pulmonary infection, and tonsillitis, and sometimes high temperature from wound infection. If any of these

accidents happen to the seriously sick patient the chances of death are greatly increased, and in my work last year fully 50 per cent of the mortality came from these postoperative complications. So I think it is well to bear in mind that the preparation of very sick patients is most important.

Dr. E. F. Howard (Vicksburg): I hesitate to follow in discussion these two very distinguished gentlemen who have just spoken, but sometimes the ordinary fellow can help to drive home a point, and that is what I am trying to do now.

I wish first to speak of focal infection and the possibility of the inflamed tonsil having something to do with it. I see quite a few of these cases myself, in throat work, but it was a new thing to me that focal infections should have such an effect upon goitre etiology until Dr. Parsons brought it to my attention. I have seen most of the cases on which his paper is based. The first case in which I really accepted the idea was one that came eight months following the removal of the thyroid—came for a tonsillectomy. I did a tonsillectomy and, while I do not claim the credit for it myself, since I did not suggest the tonsillectomy, the patient got very material relief above what she already had, and she finally got entirely well.

The next point is that of laryngoscopy. Paralysis of the recurrent laryngeal nerve is not such a rare thing that we can wave it aside as never going to happen. A man can get along very nicely, indeed, with even a complete paralysis of one of them. I recall one instance in the army, a man who passed the Draft Board and had been in the service six months with complete paralysis of one of the recurrent laryngeals. Dr. Parsons said in a series of 1,000 cases, 30 showed paralysis of one or both nerves. If you operate on a patient with paralysis of one recurrent laryngeal and you happen to damage the other one, you have made trouble right there. If you knew before you started to operate that that patient was paralyzed on one side, I think you would be a little more careful in what you did. At any rate you could protect yourself by telling the patient of the added danger and wouldn't be so apt to be running to the council for defense from a damage suit.

Dr. J. G. Gardiner (Columbia): One point I have learned is that after a patient has been operated and returned to the room, while she is still under the anaesthetic, I have the nurse notice whether the patient is able to talk, whether she can use her voice. I did a thyroidectomy on a woman some time ago. She knew quite a bit about thyroids and something about the recurrent laryngeal nerves, so after she awakened she had total loss of voice. I examined her carefully and could not find out why she could not use her voice, but she went on that way for nearly a month. Then she came in one day and said, "I believe if you were to give me an anaesthetic and loosen my vocal cords I would be all right." So I gave her an anaesthetic and put a laryngoscope down her throat, and she was all right. I mention that to show that if a patient develops hysteria it may cause a lot of trouble.

Dr. G. Street (Vicksburg): The last speaker reminded me of a case that I had two years ago, a patient who lost her voice following a thyroidectomy, and it went on for two months. Examination failed to show any paralysis of the vocal cords, and I suspected an hysterical condition. I told her several times that I was going to give her

electrical treatment to bring her voice back. She got that impression in her mind, and then by means of a little Faradic current on her tongue I gave her a shock, and her voice came back immediately and has been all right ever since.

I think the point that should be emphasized most in dealing with cases of exophthalmic goitre, and a point which has been stressed already, is pre-operative treatment, particularly with Lugol's solution. It was my good fortune about two years ago to hear Dr. Sistrunk speak on this subject, and we at once began the use of Lugol's solution in the preparation of our patients for operation, and since that time we have noted that the surgical mortality following operation of exophthalmic cases has dropped almost to nothing; barring, of course, the occasional postoperative complications. We do not see the intense toxemias we used to have following thyroidectomy, and besides, we have been able to operate on more cases without preliminary ligation than before we used the Lugol solution.

Dr. W. H. Parsons (closing): Dr. Crawford spoke of lack of these cases down here. I want to bring out the point that there are possibly more of these cases than we realize. I think frequently cases are overlooked.

Most of the cases I have operated upon have been done under local anaesthesia, and, of course, with this form of anaesthesia one can test out the voice at any time. To me that is one of the attractive features of local anaesthesia. Of course loss of voice from hysteria can be dealt with, but if one is so unfortunate as to traumatize both of the recurrent laryngeals, that is a different affair. So it behooves every man who does this class of work to avoid this complication.

I want to thank Dr. Sistrunk for his discussion.

## REPORT OF TWO CASES OF DERMOID CYST WITH TWISTED PEDICLE.\*

ADA SCHWING KIBLINGER, M.D.  
NEW ORLEANS.

*Case 1:* Consulted by Dr. Elliott Kiblinger and the writer in the spring of 1911 on account of rapid loss of weight, fever and pain in abdomen. She claimed to have noticed a gradual enlargement of abdomen extending over a period of two years, but which lately had taken on a more rapid growth.

Family history negative. Patient, Mrs. G., age 28 years, white, farmer's wife, 2 para, 0 abortions, on inspection showed marked cachexia, prominent abdomen. Examination showed temperature 103f., pulse rapid. A large mass could be felt in abdomen, movable and irregular, cystic in feel. Immediate operation was advised. Patient waited to consult family and within three days experienced sharp pains in abdomen, symptoms of shock and sepsis. Immediate operation was urgently advised. A median incision was made from which about a pint of bloody fluid escaped. The tumor was dark in color and shaped like a cushaw with its stem completely twisted on itself. In size it was larger than an adult head. The stump, about two inches in thickness,

\*Read before the Orleans Parish Medical Society May 26th, 1924.

was clamped and tied in sections and tumor amputated. The opposite, or left side showed a smaller mass about the size of a cocoon also involving the ovary. This was also removed. The masses on section proved to be dermoids. This patient is well today and conducts a business in New Orleans.

Case 2 is of D. L., near New Orleans, age 3½ years. Her mother consulted me on May 30, 1923, and gave following history: Child ill nearly all of life. Pneumonia about a year ago. In hospital long length of time. Recurrent attacks of indigestion. For over two years under care of a physician.

Inspection showed an anemic looking child with cervical glands slightly enlarged. On palpating the abdomen a movable mass the size of a golf ball could be felt. Not being able to determine what it was, advised G. U. and G. I. pictures. These were reported negative. I advised further measures to find what this mass was before it gave trouble, but did not see the patient again until September 23, 1923, when I was sent for to see her at the Hotel DeSoto. Her home doctor had advised the parents to bring her to the city as surgical measures were indicated. This illness had lasted three days. There was fever, nausea, vomiting, pain in abdomen, and a larger mass than I had felt before. The child grew rapidly worse, lying in a doubled up position with tense abdomen.

Dr. Elizabeth Bass made blood examination and found leucocyte count 24500. Child was removed to Hotel Dieu and at 5:30 p. m. abdomen opened with Dr. Elliott Kiblinger assisting and Dr. Cain administering the ether. Free peritoneal fluid was present and a mass the size of an orange and dark in color was delivered. The stump was small and twisted twice on itself. This was clamped and the mass was removed, the attachment being in the region of the ovary. Convalescence was rapid.

The interesting features of Case 1 are: the sudden developing symptoms of malignancy superimposed on a sudden twisting of the pedicle; the greenish yellow hue of the skin with rapid loss of weight the preceding month; finding a dermoid of each ovary in a multipara, and the operation being performed in the patient's home.

In the second case: the age of the patient; the duration of the illness; the attacks of indigestion which may have been caused by a partial twisting of the pedicle which righted itself; the sudden and rapid developing symptoms of sepsis after so many months of chronic illness, and the rapid convalescence.

Comment: The tendency of ovarian dermoids is to malignancy. Danger of sudden twisting of the pedicle of such a tumor makes its removal imperative.

#### DISCUSSION

Dr. H. W. Kostmayer: It is certainly unusual to think of finding one in a child, as young as she did, especially growing with the rapidity to promote twisting.

The most interesting feature of paper to me is the successful performance of the operation

in the patient's home in Avoyelles parish. I often wonder how these things can be done with such ease. I have seen them done, but when I think of the difficulty that I encounter with all conveniences, I cannot help but wonder at and admire the successful demonstration of the operation in the patient's home. I think the doctor is to be congratulated on the result.

Dr. John F. Dicks: It has been my experience that dermoid cysts are usually bi-lateral. This fact was borne out in Dr. Kiblinger's first case. I would like to know the condition of the other ovary in the second case.

Dr. Kiblinger, closing:

Answering Dr. Kostmayer, I would say the operations in the homes are difficult. We found by using great care we were successful. Our mortality was low.

Answering Dr. Dicks about the second ovary being in trouble: The other ovary in the child was to all appearances normal.

### THE REHABILITATION OF THE RECOVERED PATIENT.\*

DAVID H. KELLER, M.D.

*Assistant Superintendent, Louisiana Hospital for Insane,*

PINEVILLE, LA.

The service a State Hospital for the Insane renders its district is in direct proportion to the movement of its population. This movement consists of admissions, deaths, and discharges. Admissions are vitally necessary in order to accomplish the purpose for which the hospital is organized, and in order to provide for these admissions, patients have to leave the hospital, and while we expect in the natural course of events a certain percentage of cases to die, yet, the far more preferable vacancy is caused by the ultimate recovery and discharge of the patient.

It is not to be taken for granted that the word "recovery" means either that the patient is mentally well for the remainder of his life, or has completely wiped out of their mentality, all vestiges of the mental illness. In fact, we have a special term which is applied to one class of cases, namely "social recovery," by which is meant a recovery sufficient to enable them to resume a place in society, but not completely recovered from the residue of their psychosis. Yet these cases of "social recovery" frequently remain in private life for years, being able to adjust themselves to their environment in spite of the slight remnant of "queerness" which stamps them as somewhat unusual types of mankind.

\*Read before the Louisiana State Medical Society April 22-24, 1924.

Consequently, to make room for acute cases of insanity, the superintendent and staff of a State Hospital are constantly going over their patients in an endeavor to select those who can, either on account of complete recovery, or social recovery, once again take up their place in society outside the sheltering walls of a State institution.

Once a patient has been presented to the hospital staff with a recommendation for discharge by the ward physician in charge of their cases, and the staff places itself on record as approving of their discharge, the next problem is to secure the co-operation of the family in actually removing their relative from the institution.

You would be surprised to see how extremely difficult this is in many cases, either on account of the family's poverty, indifference, or actual hostility to such a move. Many persons feel that once their relatives are securely placed in a State institution that they are there for life and actually consider it an insult if the suggestion is made to them, that, on account of the recovery or great improvement of their relatives, that they re-assume the responsibility of their care. The result is that every institution has a certain number of patients no longer in need of institutional care, but who perforce have to be kept as patients because no one will assume the responsibility of their care, and thus they remain, especially the aged, as life long charges of the State, taking up room that should be taken by cases of acute insanity.

However, it is not this class of patient that we are considering, but the patient who has been discharged and returned to his community and family to resume his place in society. Their value to their family and society depends entirely on the length of time they are able to be self-supporting, support their families and refrain from being in anyway a menace or source of irritation to the surrounding community. We can expect in certain psychoses a recurrence of the attack, but the further apart these attacks are, the greater benefit the patient is to their family and community and the less expense to the State.

It has, therefore, seemed advisable to investigate briefly the causes that interfere with the rehabilitation of the recovered case, and just how the patient can be shielded from these so as to remain free from future attacks. Primarily it seems that the attitude of the community to the

returned patient is unfair and entirely different than it is in other classes of disease. The recovered cases of pneumonia, typhoid or fracture, can be returned from the hospital and nothing much thought of it, they are certainly welcomed by their family and neighbors. The patient, however, who on account of mental illness, has been to a State Hospital for the Insane, has recovered and returned home, is looked upon with suspicion by all who come in contact with them. All their acts and all their words are carefully weighed, the entire neighborhood constituting itself as a committee of the whole to see who can first detect some abnormality which indicates a return of the psychosis. The family, especially, is intolerant of any unusual behavior and constantly threatens to send the patient back to the hospital if they don't behave themselves. On this account any serious effort on the part of the recovered patient to resume their former station in life, is looked on askance by the family who have managed things while the father or mother was away, and investigation reveals that many of our discharged patients are constantly being threatened with return to the institution if they are not content to retain a subordinate place in the affairs of the family. In other words, there is a tendency to look on the insanities in a medieval manner, to consider that in some way the patient is at fault and that once they have been in an institution for the insane, they must be always the object of suspicion and constantly under the liability of return to the hospital, not indeed, for treatment, but simply as a punishment for refusing to accept in every way the dictum of their family or neighbors as to their conduct and mode of daily life. How fortunate it would be if all of our patients were welcomed home by loving friends and neighbors, and the first trying months of their life outside of the hospital made comfortable and pleasant by the kind ignoring of their past, and the overlooking of idiosyncracies which are common to all of us. Here let me recommend to you the conduct of a little Moravian Community at Emmas, Pa. Banding themselves together in 1761, they realized the possibility of having to provide for the occasional case of mental trouble, so in paragraph 25 of their articles of agreement, they wrote:

"Should any person, by the all wise Providence of God, be deprived of his senses, he shall, for God's sake, be mercifully treated and patiently borne with and be committed to the care of discrete persons to be attended and nursed by them



both as to soul and body, and if so be, he is restored again, no mention shall be made of the former situation in any wise."

It is to this final sentence "that no mention shall be made of the former situation" that I particularly wish to call your attention, and make the bold statement that if we could only have this rule applied to every discharged patient, their lives outside the institution would be more profitable and happier, and the period of their mental well being infinitely prolonged.

There are two factors that act as deadly poisons to the recovered patient and unfortunately are becoming more common. These are alcoholism and drug addiction. The mental system just recovered from a manic depressive psychosis can ill stand the toxins of the average bootleg whiskey, cocaine, or morphine, and this is especially true of the colored race, and many patients are returned to the institution who would have remained out indefinitely if they had not indulged in these deadly poisons. Equally dangerous to the female sex is the stress of poverty, malnutrition, child birth and the subsequent lactation. All these are predisposing factors of the gravest import to the recovered female. It would seem that on their return to their homes every effort should be made to shield them from the vicious results of the stress of modern life; as we know that those who are able to pursue a sheltered, quiet life remain mentally well. Too frequently these unfortunate women, white as well as black, are returned to us showing too plainly the poverty and hardships they have had to endure and the history of another little life brought unwillingly into the world during this period. It is no wonder that a mentality slightly abnormal breaks under the strain.

Poverty in itself is a cause of relapse and during periods of high water and overflow there is not only an increased difficulty in securing the discharge of the recovered patient, but also a greatly increased return of patients to the institution and this return seems to be directly dependent on the increased poverty of the overflowed community.

At the time of discharge of a patient from the Louisiana Hospital for Insane, the superintendent, or in his absence a member of the staff, carefully goes over the patient's case with the family and advises them as to the proper care of the patient outside of the institution. Correspondence is always invited and welcomed, and frequently by advice given in letters, a

threatened relapse can be avoided. Correspondence with the patient's family physician is especially welcomed and every effort made to secure the most fraternal co-operation with him in their care.

What more can be done to assist the recovered cases in their effort to remain normal? In certain of the States welfare workers look after all discharged cases and endeavor to help them and their families during the trying months of final mental convalescence. This may ultimately become workable in Louisiana, but the distances are so great that the cost would likely be a prohibitive factor. The question remains, however, as to whether a greater interest on the part of the medical profession in these cases would not be productive of much good. Certainly the family physician has a very definite part to play in the education of the community and the family in regard to the better and more sympathetic care of the returned patient. Just how far he can be assisted in this work by the legal profession and the religious leaders of the community is a question worthy of consideration which only the future can decide. Certain it is, that the charitable organizations of each parish should pay especial attention to the families where either the father or mother is a recovered patient. Financial aid in periods of stress to these families may aid the recovered patient in maintaining their mental poise and remains a potential source of revenue to the State, rather than a complete loss.

The present growth of our State Hospitals cannot continue without becoming an actual menace to the financial life of the commonwealth. It is not enough to attempt to cure the citizen who has developed a psychosis, greater care must be taken to prevent him from doing so and also, once he has recovered, to keep him so. This care of the recovered patient, so that he can complete the process of rehabilitation, is of such importance that all branches of the professional, intellectual and social departments of State welfare work should work in the closest harmony to promote the same.

#### DISCUSSION

Miss Betty C. Britton (State Hospital Jackson): Dr. Keller asks what more can be done to assist the recovered patient in his effort to remain normal. I answer without hesitation, "psychiatric social work."

The good will and confidence established between the social worker and the patient, during his residence in the hospital, should follow him to his home, helping him, first in educating

the family and community in their treatment of the patient, getting away as far as possible from the morbid curiosity and fear that still remains with the public in regard to mental illness; smoothing out the difficulties, and finally getting him established in some work that will make him feel that he is once more a useful member of the family and society; urging upon the family and the patient the fact that play is as necessary as work. This assistance given often enables him to prolong his stay at home, if not to make a permanent recovery.

The cost of social work at first glance seems prohibitive—the cost of everything is comparative. In the hospital where social service has become a well organized department, this branch of the service is looked upon more as an investment and an asset than as an added expense. When you consider that six patients on parole mean a saving to the State of the salary of a worker, it can readily be seen that all paroled above that number are an investment. This aside from the humanitarian aspect of the work, makes it clear that social service has come to stay and it will not be long in the future before every hospital will consider it a most necessary department.

Dr. Keller has spoken of the recovered patient who remains in the hospital because there is no one to assume his care. It is comparatively easy to return a recovered patient to his home at any time during the first year or two of his residence in the hospital, but after that time, each year makes it increasingly difficult, for his place in the home life is lost. Here again a personal visit of the psychiatric social worker can frequently do more toward rehabilitation than anything else; educating the family and community in the care and treatment of the patient, making them understand that mental disease is not a disgrace and is to be treated just as is treated any other disease.

Through the efforts of the social department of the East Louisiana Hospital, many recovered patients have been paroled and discharged, who have been in the hospital for years and were considered homeless and unable to make a living. Communication has been established with relatives and friends, the patient sent home on parole, and found to make social adjustment and in some cases to become a useful citizen. I have in mind among many others, the case of a young woman who came over here from England with her husband. He was at sea most of the time, leaving her alone without friends. She brooded upon her loneliness and soon had to be sent to the hospital. An interview was obtained with the husband and he was prevailed upon to take her back to her family in England. I could tell of many such cases had I the time, where patients, some of them after a residence in the hospital twenty odd years, have been returned to their homes, both in this country and across the ocean, who otherwise would probably have spent the remainder of their lives in the institution.

The most discouraging branch of the work by far to the social worker is that of obtaining occupation for the recovered patient, who is regarded with suspicion and fear by the community, and though a better understanding is growing, we are far from the condition which obtains at a certain Eastern State institution, where there are more applications for the ser-

vices of recovered patients than can be filled, with salaries ranging from \$25.00 to \$100.00.

But, on the other hand, there is great satisfaction in realizing that by far the largest number of patients have been paroled and discharged within the last two years of any like period within the history of the East Louisiana Hospital, which gives us hope that with better roads and a better organized social service department, we shall eventually be able to decrease the population of the State hospitals.

The out clinic is of the utmost importance in helping the paroled or discharged patient in his readjustment. As yet this branch of the service is a dream in our institution, but we who are closest to the service have seen things grow so satisfactorily, that we dare hope that in the near future such clinics may be established, and in view of the fact that there are 210,000 mentally ill persons being treated in State institutions in this country, it is apparent that aside from humanitarian and charitable considerations something must be done to relieve the situation.

Dr. John D. Young (Shreveport): Dr. Keller's paper is both timely and instructive, and calls to our attention a great deficiency in our social system. Even the savages pay more attention to those mentally afflicted than society does today. The savages protected those mentally afflicted and they were not allowed to be overburdened nor any allusions made to their condition. Dr. Keller has called to our attention the large increase of those mentally afflicted in this State. I think that is largely due to the somewhat crude methods we have had at our command in making diagnoses. But overcoming the prejudice of the community to which these patients have been returned, I think is dependent to a large extent upon education, and that the education should begin in the medical ranks. The neuropsychiatrists in all parts of the country are familiar with the doctor who calls them into consultation and says, "Go to see this fellow—he is crazy," and then they drop them. It is up to us to secure the co-operation of the practitioners in these communities and to place propaganda at the disposal of those concerned—the families and others.

Regarding pregnancy in patients who have been returned from State institutions, I am absolutely opposed to it under those conditions, and I think instructions on the part of the family physician regarding the prevention is absolutely within the rights of the medical profession. If these things are allowed to go on, there will be more and more mentally afflicted brought into the world.

The social service workers of the State will be a big factor in helping in the rehabilitation of these patients. Sometimes a change in environment will produce the desired results. All these factors have to be considered and we hope to get more co-operation from the medical profession throughout Louisiana, in rehabilitating the mental defectives of the State.

Dr. R. McG. Carruth (New Roads, La.): I have listened with interest to the reading of Dr. Keller's paper and the points brought out in the discussion, and I wish to say that it is my candid belief that this larger question of which his paper covered one phase, is the most important question that confronts the civilized world today. As to the point insisted upon by Dr. Keller concerning the importance of getting in contact with the family physician, and the necessity of impressing upon him the importance of his acting

in an advisory capacity to the family in regard to the care of the convalescent patient, I want to say that the time has come when all practitioners, especially throughout isolated regions of the country, must devote more serious thought to the study of these troubles. The time is long past when physicians can ignore this question. We are all confronted with it. The time was, only a few years ago, when, in our little Parish Society discussions, little community center health meetings and in little talks before mother's clubs, the physician who dared to say much on this subject was considered radical, or even "cranky." But now the business man in the street, the poor woman in the home—everybody is beginning to recognize that the question of insanity is looming ever larger before us, and that we must begin to take thought as to what we shall do about it.

I want to ask Dr. Keller to tell us in his closing remarks, his experience in regard to the effect of the adding of the burden of child bearing with its dependent ills and its subsequent cares to these already overburdened, psychopathically weak women who are returned to their homes presumably cured, from our various institutions. This particular phase of the question is of vast importance not only to the unfortunate individual, but one in which the whole community is vially interested. If we continue to allow the unlimited propagation of the unfit it is a question of only a few years when we will no longer be able to build homes in which to house this unfortunate class.

Dr. D. O. Willis (Leesville): I have listened with great interest to Dr. Keller's paper and the remarks of those following, and I wish to say a few words as to the official who deals with the problem of getting these people into the hospitals for the insane. Some time ago I had a letter from Dr. Thomas, at Pineville, making request that we be careful about sending the old and feeble to the hospital, and others that he mentioned that might possibly be kept at home. It was not a new thought with me, and I replied to Dr. Thomas' letter to that effect—that we had been refusing to send that class of patients to the hospital.

Another point is that I feel the men who hold the position of coroner should become largely responsible for the confinement of those people, and by all means post themselves a little more thoroughly than the ordinary physician is posted as to the kind of cases that might make a recovery by keeping them at home, or perhaps confining them a little while in the parish jail, giving some consideration to that side of the question and treating them along those lines. Since I have been coroner of our parish, I have been able to send back home or to leave at home a little over 60 per cent of all the people who have had a charge of insanity made against them. My records will show that. On three occasions I have had people who have had recurrences, who are confined in jail, or who have recurrences of insanity who have been released from the institution. We got hold of them and with a little treatment and a little care we turned them loose again without sending them back to the hospital. Unfortunately, our sheriffs seem to take a great deal of authority in these matters. During my tenure of office I have had three patients taken up and returned to the hospital at Pineville without my attention having been called to them, or ever knowing they were

in the jail at all, until they were back in the hospital. I think the medical officer in charge, having posted himself as to the possibility of the recovery of these patients, should be consulted and his opinion given as to whether they should or should not be returned to the hospital. I feel that by more care and diligence along these lines we will be very largely instrumental in keeping down the enormous number of patients in insane hospitals. I do not believe the ordinary physician of today, including myself, knows half enough about mental disease. I believe we should all give more thought and consideration to these questions, because surely it is the big problem before us. I think we, as physicians out in the country, and also in the city, should be very largely instrumental in removing from the minds of the laity the idea of placing a stigma on the patient who has been returned from a hospital for the insane. We can do a great deal to remove that by putting into the minds of the people the idea that they are simply diseased persons, and while the disease happens to be in the mental system, it is no more a stigma than if these people had pneumonia or typhoid fever.

Dr. E. L. Sanderson (Shreveport): There is pending before the House of Delegates something that will come before the legislative committee—an effort to get the legislature to pass some legislation regarding marriage, or the examination of people before they are married. We have sort of considered this a joke in the House of Delegates, but it is really a very serious thing, and I would like to ask the doctor if he would give us a little information on this point, because this will probably come up Thursday for settlement. Have you any complete statistics regarding the cause of the increase of insanity? Billy Sunday was at Shreveport a few weeks ago and he has the greatest store of statistics I ever heard of, and according to his statistics he proves that if the increase of insanity goes on as in the last few years, in 500 years everybody will be crazy. Just to let our minds go out to the future a little, would it not be interesting if we were living at the time the majority of people become crazy, because this country is governed by the majority. That really is serious. Here is a doctor who tells us that 20 per cent of the revenue of the State of Louisiana is being used in the care of the insane. That is appalling. Is it not vital that we should begin to go to the fundamental cause of this increase? Of course people will go insane as long as time lasts, but we should be able to reach some sort of conclusion as to the cause of the increase. Of course if we try to get legislation in this regard it will meet with great opposition, but there should be some restriction if this thing is hereditary, and I would like Dr. Keller to tell us if there is any definite preventable cause of the increase of insanity.

Dr. Oscar Dowling (New Orleans): Dr. Willis referred to the fact that crazy people were frequently confined in the jails. There is a law in Louisiana which says that the indigent poor shall be cared for by the parish or the county, as the case may be. I have never seen any just reason why a man should be committed to jail because he is unfortunate enough to be crazy. I have seen crazy people in jail in the last fourteen years—some in jails that were unfit—it was enough to make any one crazy to be put there. As I said, I do not know that there is any law that justifies us in committing these people to jail. I hope in the near future some plan will be worked

out whereby every parish or municipality of the State will be obliged to take care of these people until they can be sent to the insane hospitals. Dr. Thomas, as I understand, has cleaned up the jails in his district. Dr. Evans is doing the same thing. But next year if their institutions are overcrowded they cannot take these unfortunates. I have been to Dr. Thomas' place when he has had more people than he should have had, but he did it for the alleviation of the suffering of those in the jails. If jails must be used, provision should be made for the equipment necessary to give these inmates proper attention. I hope in the future that we may not see these people confined in the jails unless they should be criminally insane.

Dr. Sanderson's suggestion, I think, is worthy of serious consideration. If we want to breed a cow, or horse, or dog, we look for the best animals we can find. I do not say that we can always get the best material, the best animals for propagating the human race, but there should be some restriction placed on this, and the sooner something is done, the better it will be for us.

Dr. C. A. Gardiner (Sunset): There is one way in which the country physician can aid materially in the prevention of the return of patients who have already been in the hospital for the insane. I recall in my practice a few years ago a patient who had been returned to Pineville on several occasions. After his last return I began to inquire as to the conduct of this man, in regard to liquor, gambling, and so forth, and I found that during the fall of the year, as soon as his crops were sold, this man would go around among his neighbors and gamble, and incidentally indulge in liquor. I thought the matter serious enough to consult the family in regard to it, and they told me their experience had been that his mental condition became deficient usually after a round of gambling and dissipation. I took the matter up with the family and neighbors and requested them not to gamble with this man any more, and through the interest of the family and neighbors they all refused to allow him to join their games for two or three years, and this man is now hale and hearty both mentally and physically, and Dr. Thomas is deprived of one of his patients. Previous to that he was returned about every twelve to fourteen months, usually in the early spring after a period of gambling and drinking liquor. I think Dr. Keller's point in regard to the family physician taking an interest in these patients after they have been returned, and possibly before they go the first time, is very well taken.

Dr. Roy M. Van Wart (New Orleans): I cannot let the paper of Dr. Keller pass without presenting to you some aspects of the situation that appear to me as one who is interested in a subject, not from an industrial point of view. For the last twenty-five years I have been interested in mental cases, and have been seeing them in the home, in out-patient clinics, and in private practice. I also have been instrumental in committing a large number to our institutions.

In the first place, I think the institutional side of it is much more important than Dr. Keller, in his paper, has led you to believe. There are thousands of cases probably who, while they make a social recovery, are unable to get along well with the family. They cannot get along with their neighbors, and those around them. It is true they are working and do get along, but the influence among the rising generation is some-

thing that we cannot lose sight of. I have seen a great many cases in which a so-called social recovery was instrumental in producing a breakdown and trouble growing out of it.

In the next place, as Dr. Keller says, 20 per cent of the taxes of this State are used in the care of mental cases, and Louisiana has been severely criticised for this. In many of the Eastern States it rises considerably over 30 per cent.

What are we going to do with a good many chronic cases? We find a case of senile dementia that the institution does not want to take, the family cannot care for them, nor does the State Hospital take these cases, so what are we going to do with them? We find many cases suffering from mental disorders where it is not possible to commit them, and yet they are chronically under the care of a physician and are unable to cope with the problems that present themselves. So we have those cases that are definitely institutional, acute mental disorders—those cases that are a menace to the community; then those cases in which we have to have some custodial care on account of the people being unable to take care of them, and then we have a great many cases that while they get well outside, do very much better in institutions. We constantly see cases that should be in institutions and who are not there simply because of overcrowded conditions that make it impossible for the institutions to take them.

The increase of this type of disorder is to my mind due to the increasing complexities of living. The mental capacity of the individual will carry him just so far and when the strain becomes greater than he can carry, something happens, and that usually is a psychosis of some kind or other. It may be a minor type, which the physicians are familiar with as neurotic, or it may be something in which the individual becomes such a menace that he must be confined. If we limit our care to such patients as of necessity must be confined, we are losing one of the greatest opportunities that the State Hospital affords.

We cannot overlook the obligation that we are under to care for those that cannot be cared for in any other way. The solution is not the question of returning as many people as possible to their homes; the solution is increasing the means of caring for these patients.

The next problem that presents itself and that we must consider is the necessity for an early diagnosis. I do not believe that cases should only be treated after they have reached the point where the psychosis is fully developed, but they should be recognized at a point where constructive treatment is possible. The history of these cases will tend to show that their psychosis extends not over a few weeks, but over months and years; that it is the result of long continued stress and not the result of any sudden thing. It is true the sudden onset is extremely frequent, but we lose sight of the pre-existing factors in the make-up of the individual, and also the conditions with which he is surrounded. So this problem must be attacked, first, by the proper education of the profession in the recognition of these cases at a time when it is possible to take up constructive treatment; to open hospitals whereby these people may be taken care of, and to attempt as far as possible to teach the public to recognize those early symptoms and seek advice at a time when something may be accomplished.

The great difficulty we have found is lack of

co-operation on the part of those with whom you have to deal in connection with many of these cases. We are in the same condition today in regard to mental diseases as we were twenty-five years ago in regard to tuberculosis—we could not get co-operation. Today the very name "tuberculosis" means active co-operation. So more attention should be paid to the development of even minor psychoses in a proper way at a time when something constructive can be accomplished.

I do not wish to discourage the work that Dr. Keller has brought before you. I am not in favor of keeping the patient who can carry on his work outside, but I believe great care should be taken in regard to the surroundings of the patients before they are sent out. I believe there are two aspects of the question that we should not disregard—the more or less humane aspect, and then what is to be done with these individuals.

Dr. W. J. Otis (New Orleans): The community is much to blame, and also the State, for the crowding of our hospitals and institutions for the care of mental diseases. There are patients in those hospitals who can be well taken care of at home, thereby reserving the hospital space for acute and recoverable cases. The community itself is largely to blame, and incidentally sometimes the physician, for not having the proper idea and extending the proper co-operation to the individual who returns rehabilitated from the mental hospital. We know in the army each town sent its quota of mental defectives. You have no idea how many individuals came from towns and also from cities who were put into the domestic service battalion and never went over. Why? In some way they were not able to fit in their hometown environment, when their turn came they were sent.

The individual who is rehabilitated from the mental hospital should be given his pre-hospital status. Do not look upon him as a pariah, something to be feared. The family physician can aid materially and socially by giving counsel to the patient's employer and family—numbers of cases recover never to occur again. The incurable psychoses cases can be placed in various occupations—in the fields or driving wagons working about farms. The epileptics can be given something to do, and thereby keep down the number in the institutions. We have epileptics working around our towns and cities who have attacks and in an hour or two they are back at work. If the unfortunate is not given the proper chance, if he is returned to his old environment, the result is that in a short time there is a recurrence. That is why many of these cases refuse to go back to their home town. A lot of them go to other towns and make good.

Another important factor is failure to provide adequate, up-to-date structures to take care of these people. A ray of light is striking this State now and they are doing much in a modified way. Dr. Thomas and Dr. Evans are doing the best they can with what the budget allows them, which is far low, for a productive State like Louisiana. Patients do adjust following recovery if communities will do their part.

In closing, please keep the State Mental Hospitals out of politics, except to that extent where the politicians aid in supplying the money.

Dr. John N. Thomas (Pineville, La.): This paper has taken a very much wider range than I or Dr. Keller expected. I am delighted, however,

to see that it has done so. His paper is on the "Rehabilitation of the Recovered Patient." According to Dr. Kreplin, the great German psychiatrist, mighty few patients, however, do really recover. Certainly there have been many interesting things brought out in this discussion. I will not, however, go at length into this, but there has been a question brought up by Dr. Carruth asking if something could not be done to decrease the number of insane and feeble minded. In my opinion that is the most momentous question at issue. The only thing to solve this question is sterilization—segregation will not begin to do it. It has not done so in any State in the Union where tried and it is impossible to think of segregating all of the feeble minded in any State.

Dr. Evans, the superintendent of the Colony and Training School for the Feeble Minded at old Camp Beauregard, has stated to me that there are over 4,000 feeble minded people in Louisiana, and at the small cost of \$20.00 per month it will be readily seen that it would cost over a million dollars a year to feed and take care of these people under segregation, were it possible to segregate all of them. Year after year we hear this subject discussed at every meeting of the Medical Society without getting at the real meat of the question at all.

I am satisfied that there will be great opposition against sterilization, but it is a simple surgical matter and is being done now in several States. Virginia has recently enacted a law that is now being enforced and it will be an interesting thing to watch the result of its effect there. I believe that in two or three generations that insanity will be reduced 50 per cent or more if sterilization is resorted to.

Dr. Dowling has referred to the custom of putting the insane in jails awaiting their transfer to one of the State hospitals. This seems bad and it is in some cases, but what is to be done about it? What are you going to do with these people when both institutions of the State, Jackson and Pineville, are filled with patients and have no vacancies. These people cannot be kept at home and they have to be put in jails until such time as they can be admitted. It is all well enough to talk about the outrage of doing this, but I cannot see anything better. It costs money and a lot of money to put up big buildings at the State institutions for the care of the insane, and this cannot be done in a day or so. It is well enough to talk about this, but it is a very costly thing for the State to do this in advance of the real necessity for doing so. The State has done in the past two years all that it could possibly do in the way of putting up buildings for its insane. Over \$500,000 worth of magnificent buildings have been put up at Pineville, and I think a like amount has been spent at Jackson.

A good deal has been said in this discussion about the release of patients from the State institutions. As far as it has been within our power at Pineville, we have discharged our patients as rapidly as we thought we could get them out. This has been necessary in many cases in order to get new people in that were clamoring for admission. There are cases that may be excited for a day or a week, or a month, and then become perfectly sane again, and even if these patients have to be returned later, I do not think it just to them or to their relatives to keep them indefinitely in the hospital. If you were to do this you would soon have an immovable population,

and the question of building more and more would be constantly confronting us.

We have made it a rule at Pineville to get white women as soon as the application is made and sent in, and very few go to jail, and when they do we get them out as soon as possible.

I want to revert to the main question at issue, i. e., the one brought out by Dr. Carruth of Pointe Coupee—"What should be done to stop the increase of the feeble minded and the insane in this State?", and I unhesitatingly say that the only way to do it, and to do it right, is to compel the sterilization of both male and female demented.

Dr. E. McC. Connely (New Orleans): I think Dr. Keller has struck the keynote of readjustment, and that in the re-education of the general public with changes in their ideas of insanity lies the solution. Teach them that it is not a stigma, that it is not a crime, it is a misfortune, and the man who is suffering from insanity is just as much sick as the man that has typhoid fever. If we do that the men who come out of the hospitals will be able to go back to some kind of work and their record will not follow them from place to place as they go. We have to teach the public also to realize that a large proportion of people become insane because of some lack of adjustment, possibly in their home surroundings, and we have to train the family physician to recognize this lack of adjustment and in some way remove it. If we do this we will have solved the State Hospital problem in that we will keep a great many men from going to the State hospital entirely by recognizing them early, as Dr. Van Wart has suggested, and removing the cause. In this way we can save a good many people from becoming insane.

Dr. C. V. Unsworth (New Orleans): I have been very much interested in Dr. Keller's paper, and I thoroughly agree with him. The trouble with the average patient that leaves an institution is that he is thrown out on his own resources, and he has no one to advise him what to do, how to adjust himself, or what kind of a life he should lead. I might say that if a man is doing clerical work, my opinion is that he should not be permitted to go back at that, but he should be given some mechanical work in which he uses his muscles and not his brain.

The average doctor rarely makes an examination to justify a classification or a diagnosis of mental cases. The consequence is that these people are all labeled insane. I have had them sent to me where the doctor had written, "He is nuts." That is uncalled for and very unscientific, and I think that the doctor who sees the patient first should advise the family of the nature of the illness and not depend on the people at the hospital to tell him whether he will or will not get well. That is what the family wants to know—"Is he going to get well?"

Another solution is the establishment of psychiatric clinics. If we had a psychiatric clinic somewhere in New Orleans, or in any part of the State, the State institutions could then refer these patients to these clinics, to men trained in this work, and to social workers who would be able to teach them how to readjust themselves.

I do not approve of placing these people in jail. I think these cases, if the mental condition is recognized early, should be placed in an institution. Nothing takes the place of institutional care. As soon as they are well, they should be released from the institution. It is ridiculous to

keep a mental defective case in an institution and wait until they have another attack. A man with manic depression is not any crazier than a patient with typhoid fever. I have a patient now who was sent up from Pineville who had some gall bladder trouble and his gall bladder was removed and he is all right now.

I think if the general practitioner will educate himself in the classification of mental conditions, he will help a whole lot in doing what Keller suggests should be done to rehabilitate these people when they leave the institution. I have a woman who is about seven months pregnant. No State institution takes that kind of a case. What are you going to do with her? We do not take them, but the Sisters at the Louisiana Retreat have taken this woman. About a month before she is to be delivered I will send her to St. Vincent's and deliver her there. This woman is a case of paresis. There is no question in my mind that she had paresis long before she became pregnant.

Dr. L. L. Cazenavette (New Orleans): We have heard a masterly address from Dr. Keller, the discussion that followed has been very important. You will agree with me that a great deal has been covered with regard to what may be done for the patients who have been discharged from an institution for mental disease. I feel, as has already been stated, that the public particularly should be educated to the fact that many of our psychotics do get well. They may not remain well, but they get well sufficiently to return to their former occupations. They should be given a chance.

Dr. Unsworth in his discussion brought out the necessity for the institution of psychiatric clinics. I have on previous occasions mentioned this necessity. In the work I am doing at the clinics of the Charity Hospital, this point comes forcibly into my mind; i. e., the necessity of establishing such a clinic. The work that is done there among the ordinarily nervous patients can be handled fairly well, but when it comes to handling neurotics and psychasthenics, or that class of patients we have not the time nor the proper surroundings to do that work. I do believe that the establishment of such a psychiatric clinic where such patients could get proper instruction as to what they should do in order to prevent a complete break down, would help a great deal to limit the number of patients that are sent to the various institutions.

With regard to the point that Dr. Thomas has brought out—sterilization—I believe it will be a very hard matter to have our legislators pass laws to that effect even though it be the most positive means to prevent the continuous increase in the number of our insane.

Dr. H. E. Menage (New Orleans): It is a long way from dermatology to the subject under discussion; what I heard here is a perfect revelation to me. I believe that Dr. Keller's paper should not be buried in the archives of the State Medical Society for doctors only to read, but that a propaganda be instituted, as the Federal Government has instituted in regard to syphilis and as every community has in regard to tuberculosis. I believe a reprint of the paper and its discussion should be given to the public at large so that the people be informed of the importance and the difficulties of this problem.

Dr. David H. Keller (closing): There has been so much said and so well said that I hesitate to take up any more time, but I suppose it is expected of me to do so.

In regard to the question of early diagnosis, I want to make but one statement, that there is no specialty in either medicine or surgery concerning which the general practitioner is so ignorant as nervous and mental diseases, and apparently so perfectly content to remain ignorant. I have had the privilege of serving under Dr. Thomas for five years, and I know that many times, privately and publicly, Dr. Thomas has invited physicians to attend our staff meetings, which are held twice a week, and in which our cases are studied and presented as well as they are in any State institution. But during the five years I think that on an average there has been one private practitioner every year who has availed himself of the opportunity to come and find out something in regard to making a diagnosis of these cases. In other words, in the five years I have been there, there have probably been five physicians who have come to see just how we make a diagnosis. So for those persons who live in rural communities, away from centers like Shreveport and New Orleans, it is almost impossible for them to have an early diagnosis made.

In regard to the question of the prevention of child birth, in a recovered female, I can only say this. I believe the time will come in the United States when it will be legal for physicians to give advice to men and women who are really anxious to avoid having future children. I believe that it is being done surreptitiously now by many physicians, but it should be done more openly, and I believe that no woman who has gone through a psychosis and who has returned home should be compelled to give birth to more children.

The question as to the cause of increase in insanity, I do not believe we have so many more people who are peculiar or insane than we ever have had, but it is becoming more popular to send them to State institutions for the insane. All of us are more or less insane, but it is only when we come in contact with authority that we become hospital patients. It is no longer looked upon as a disgrace to send your relative to a hospital for the insane, and in some centers it almost seems to be the fashion. Unfortunately this is true in regard to the senile. It seems that just as soon as grandfather or grandmother become a slight burden to the family, some kind friend suggests that the family send grandmother or grandfather to the State hospital because "they are crazy." If there is any person in the State who has reached the age of seventy-five and is not in some way peculiar, I would like to see them. I do not believe that insanity has developed as rapidly as would appear. I simply believe that more and more people are becoming accustomed to using State institutions.

Regarding the question of heredity, that is a moot point. One of the greatest psychiatrists in the United States, Dr. White of St. Elizabeth's says he does not believe in it. In our institution we do believe in it thoroughly and we have statistics of one family in Louisiana that has sent, in the last three generations, to Jackson and Pineville, over seventy-five members. I will not name that family, because some of you may be related to them. But when you see some of the most prominent families in the State—

and there again I might name them if I wanted to—who have contributed anywhere from five to seventy-five members of their family to State institutions, you cannot help but feel there must be something in heredity.

In regard to the question of marriage and a law regulating marriage, I believe no law is any stronger than the community in which it is a law, and no law will be stronger than the person authorized by that law to enforce it. If you have a law that provides that if two people want to get married, they shall go to the courthouse and answer certain questions and if they answer the questions, they are allowed to marry, such a law will not do any good, because if they want to get married they will be willing to lie about it, and if the clerk of court will take their statements, that is all that is going to be done. The law in Wisconsin provides that a Wassermann shall be made, but that has not amounted to anything, because in every community there are physicians that will return a positive or a negative Wassermann according to the price they get for it. When it comes to the question of sterilization, that is different. I believe that that is the only possible solution, but whether it will ever become a State law or a national law, is a question, because just as soon as a law like that is passed, some "dear friend of the people" will come before the Supreme Court and try to declare it unconstitutional. That has been done in other States. But the principle of it is perfectly correct.

Finally, in regard to whether the State institutions should discharge patients. The only way we can pretend to take care of the insane of thirty-eight parishes is by discharging patients. We have to discharge them pretty nearly as fast as we admit them. If we do not we will have a population of 2,000 to 2,500, where we only have room for 1,200. It is not a question of whether we discharge them too early or whether we ought to keep them longer, but we must discharge them. If we do not, we have absolutely no room for the acute cases of insanity. Every week Dr. Thomas discharges patients that we know are not 100 per cent recovered. We must do it in order to keep the population moving. There are certain State institutions in Massachusetts, called permanent institutions, and they keep patients there that they know will never recover. In Pennsylvania they have in each county an almshouse, and the State Hospital for the Insane sends back to these almshouses the old chronic cases, thus making room for the acute cases. But in defense of ourselves, of the State of Louisiana, we must discharge our patients in order to make room for the care of the acute cases.

I think that is about all there is to say, except in regard to the question of financing. I do not believe that any program for the care of the insane that will involve thirty or thirty-five per cent of our total State income will ever pass the State legislature. I believe we are getting the maximum and we must do the best with what we have. In spite of the fact that we have three new dormitories at Pineville, I think there are 125 patients sleeping out on the galleries. We cannot get any more money and we have to do the best with what we have.

## HEAD INJURIES.\*

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My experience with head injuries with especial reference to intracranial injuries, has not been a large one, but I have seen enough of them to become very much interested. Not infrequently, we read in newspapers or hear of a person being found unconscious, cause unknown, until sometimes it is too late to attempt any surgical procedures, we get a history of a head injury, followed by temporary unconsciousness, a period of recovery and unconsciousness again.

This type of head injury, as a rule, means an intracranial hemorrhage with its classical series of symptoms and is the kind that illustrates the brilliant results often obtained by surgical treatment.

The above facts, together with two fatal cases, the reports of which I shall give later, which have, in the recent past, come under my observation, but were not operated on, prompt me to write on this subject in order that I might impress on all of us the necessity of obtaining a careful, accurate history, close observation and watchful waiting in all cases of head injury, no matter how trivial they may seem. Much has been written recently on this frequent injury, and there still remains confusion both as regards the classification and the treatment. Since treatment must be directed toward relief of the disturbance within the cranial cavity, chiefly, classifying the type of fracture, does not indicate the nature of intracranial injury, and, too, intracranial injury may occur without any fracture.

I have nothing to offer in the way of classification, diagnosis or treatment, but I like Dr. F. C. Grants's grouping of cases as follows:

(1). Those cases that die no matter what is done. Massive brain injury cases, with fixed, dilated pupils, comatose, stertorous breathing and very slow or very rapid pulse.

(2). Those cases that recover spontaneously without treatment. The so-called concussion cases, when neurological examination fails to reveal any evidence of serious brain damage and there is no alteration of pulse, blood pressure and respiration.

(3). The intermediate group that will

die if untreated but which may be saved by intelligent and timely interference.

In the management of these cases every effort should be made to determine to which of these three classes each patient belongs. In the past few years the tendency has been toward conservative measures rather than immediate surgical interference.

The injury to the cranial bones is the least important feature as the prognosis depends in a great measure on the damage that has been done to the brain. By surgical means we cannot restore the function of a damaged brain. It will recover what function it can, spontaneously, therefore our efforts are directed toward improving the condition which favors recovery. Any type of fracture may or may not have associated with it some intracranial injury which manifests itself as brain compression and symptoms of increased tension may occur without any injury to the skull. In the vast majority of cases our treatment is directed toward the relief of increased intracranial tension. The symptoms and signs arising from these various types of injury may be divided into general and focal ones. Our first procedure should be to determine the nature of the pathologic process and then decide on the treatment.

The most important general symptoms are changes in the blood pressure, depth of unconsciousness, pulse rate, character of respirations and eye grounds. Headache, vomiting, cranial nerve palsies and irregular pupils are less important symptoms. The most important focal symptoms are convulsions, general or focal, paralysis, and abnormal reflexes. Any of these symptoms may be produced by any intracranial injury, causing an increase of intracranial pressure, e. g. hemorrhage, depressed bone, contusion or laceration and edema, of the brain. Of course the X-Ray is a valuable aid in determining the extent of injury to the bones but it is of practically no assistance in showing the degree of intracranial injury.

All patients with compound fractures and depressed fractures should be operated on, as soon as they have recovered from primary shock, even though they have no signs or symptoms of compression.

Then there are the cases of middle meningeal hemorrhage, or progressive hemorrhage from some other intracranial vessel, that demand operation as soon as the condition is determined.

This is the type of intracranial injury that I am particularly interested in, as I

\*Read before the Mississippi State Medical Association.



have known of several fatal cases that might have been saved had the history of the case been known before exhaustion of centers in medulla had taken place and it was too late to operate on them.

The classical picture of a typical case of this type injury is well known. The short period of unconsciousness, followed by recovery or a period of lucidity, succeeded by stupor, unilateral paralysis or weakness accompanied by a progressive rise of blood pressure and slowing of the pulse rate.

Then there are the cases that Dr. Sachs says "constitute the real problem," and Dr. Bower calls "Watchful waiting cases."

These cases have no hemorrhage, depressed or compound fractures but have contused and lacerated brains of varying intensity causing edema and swelling of the brain with signs and symptoms of brain compression. They show all grades of cerebral involvement from slight mental disturbance to deep coma; slow pulse rate, increased blood pressure, disturbance of respiration, ophthalmoscopic changes, cranial nerve palsies, bleeding from ears, nose or throat and perhaps focal convulsions. These cases evidently have increased intracranial pressure which must be relieved by some method.

The most desirable and effective method has not definitely been settled and is the cause of a difference of opinion among surgeons.

There are three methods in use:

(1). Getting rid of the edema by giving hypertonic salt solutions either intravenously or by the gastro-intestinal tract.

(2). By withdrawing cerebrospinal fluid by lumbar puncture, every few hours, or as often as necessary, as shown by pulse rate, sphygmomanometer and manometer readings.

This method and combining with it the use of hypertonic solutions seems to be gaining ground and is the routine treatment in some of the best hospitals. Personally, I have never used this method as I have always considered lumbar puncture for any purpose as a dangerous procedure and it is generally known that sudden death is not an uncommon occurrence in increased intracranial pressure.

Drs. Sachs and Cushing states that it is a dangerous procedure and that they never use it for diagnosis or treatment in cases of increased tension.

(3). By making a permanent opening in

the skull, decompression operation, usually subtemporal decompression.

This gives immediate relief from compression symptoms by giving the brain more room, thereby removing pressure from medulla centers and tends to prevent persistent headaches and mental disturbances.

Frequently, in doing a decompression where the brain is under tremendous pressure and pulsations cannot be seen or felt, it is necessary to tap a ventricle before opening the dura.

Before closing this paper I would like to report several cases:

(1). *R. G.*, age 12, about 4.30 P. M., while riding a bicycle in the street was hit by an auto truck; knocked off bicycle and picked up unconscious by the driver who started to a hospital with the unconscious boy. Before reaching the hospital he regained consciousness and told the driver he was all right. He got on his bicycle and went his way. Went home and went to bed that night not telling his people anything of the accident. The next morning he was found unconscious in bed and could not be aroused. They did not know what the trouble was until that afternoon they obtained the history of having been hit by truck. He was brought to hospital on my service with exhaustion of the medulla centers, moribund and died within an hour without any operation.

(2). *D. B.*, age 20, about 7 A. M., was struck on head with a keg stove in the hands of another man. He was brought to my office unconscious. In a little while he regained consciousness and I advised taking him to a hospital for X-Ray and observation. He nor his family would consent to going to a hospital. He walked out of my office and went home. That afternoon, I went to his home to see him. He had a slow pulse and was semi-conscious but could not be aroused. Again, I advised going to a hospital for X-Ray observation and possibly an operation. They would not give consent to taking him to a hospital, so I told them that I could do nothing for him there. Later, I heard that he died.

(3). *W. H.*, age 17, about 10 P. M., while running on a terrace over a sidewalk he fell, striking the right side of his head (parietal region) on the pavement. He was picked up unconscious and I was called to see him. He regained consciousness a little while after I arrived. There appeared to be nothing more than a slight contusion of the scalp. He felt all right and wanted to go home, but I insisted on taking him to a hospital for X-Ray and observation. He walked to my car and I carried him to a hospital. X-Ray revealed what we thought was a simple fracture of the right parietal bone. I put a special nurse on duty with him, for close observation, with instructions to notify me if he should become stuporous, pulse 60, or below, any paralysis developed or anything unusual happened. He was apparently all right the next morning, but I continued to watch him closely. That afternoon, his pulse rate slowed down to 40, his systolic blood pressure began to climb, he became semiconscious, with paralysis of left side of face and left arm. I advised and did an immediate operation trephining over middle meningeal artery. There was considerable extradural

blood and bleeding from a small branch of the artery. The blood was turned out, the bleeding point ligated, the wound closed with small rubber tissue drain. I found no fracture and the dura was not opened. The facial paralysis was slow clearing up, but he made a good recovery.

(4). *J. R., age 25, about 5 P. M.,* while loading logs from a truck onto a railway car, something gave way and hit him on the head, (frontal region). He was unconscious but partly regained consciousness after a short time and it was thought that he was not badly hurt. He was carried to his home. During the night he again became unconscious and was brought to the hospital on my service. X-Ray taken on admission to the hospital revealed a depressed fracture of frontal bone. He was unconscious, had a slow pulse. Blood pressure not taken, bleeding from nose, and hematoma of left conjunctive sac.

He was operated on immediately. The depressed bone elevated and removed, revealed a large extradural blood clot and active bleeding from dural veins. The clot was turned and bleeding controlled by packing. The dural was not opened.

He made a rapid recovery but was bothered for sometime afterward with double vision on account of an external squint of left eye, which I thought was due to irritation from the hematoma of conjunctiva.

I have not said anything about closing the defect in the skull after an operation, because I have never done it nor have I seen it done, but in my opinion, the bone grafts or fat and fascia grafts are the most practical.

In this connection I would like to report a case which I operated on and which was very interesting and unusual:

In 1917, about three week before I was called to active duty in war, a negro man age 40, with right hemiplegia came in hospital on my service. He gave the following history: Ten years before, he was hit in the head, (left parietal region), with a piece of iron. His skull was fractured and he was operated on in St. Louis. He made a good recovery but sometime later he lost the use of right arm and leg, which has continued to present. On examining his head, he had a fluctuating cystic tumor about size of a lemon protruding through a hole in his skull. There was a solid body which floated about in the tumor when he tilted his head from side to side. He told me that was a silver plate which the surgeon had put in the hole in his head. I had never seen anything like that so I was skeptical. I operated on him and found that the solid body was a natural silver dollar, and a cyst had formed around the dollar making pressure on the left motor centers. I removed the cyst and the dollar. He was in the hospital when I left to go to war and had regained partial use of his arm.

In concluding this paper I should like to stress the following points:

(1). The necessity of obtaining a careful, accurate history, especially in cases of suspected intracranial hemorrhage. The history of such a case is frequently classical.

(2). The necessity of close observation,

frequent pulse and blood pressure readings, and if necessary, spinal fluid readings for twenty-four to forty-eight hours in all cases of head trauma, no matter how minor they may seem at first.

(3). All surgical treatment, exclusive of compound or depressed fractures, resolves itself to the relief of brain compression symptoms.

#### DISCUSSION

Dr. J. W. Barksdale (Jackson): Doctor McLean has called particular attention to cerebral hemorrhage. To me that is very important, not only in gross injury of the skull where the defect is apparent—say compound fracture of the skull, but also in dealing with more obscure phases.

He also emphasizes the importance of the intervals of consciousness, and that is a most characteristic feature—the immediate unconsciousness following the primary injury, the regaining of consciousness after a more or less long time, with subsequent sinking into coma again. Of course it is very evident that that is due to the slow accumulation of a blood clot on the brain and is simply the manifestation of a pressure symptom. Often, however, we may not be able to locate definitely the hemorrhage, although we are sure we have intracranial pressure that must be relieved. A great many of these cases have epidural hemorrhage, and some subdural. In doing a cerebellar decompression if the hemorrhage is subdural it does not suffice to do that alone, but you must relieve the pressure within the dura itself and if possible evacuate the clot. A decompression operation is always indicated in these cases, and I merely wish to emphasize that if you are doing a decompression operation be sure to open the dura and provide for the escape of the cerebrospinal fluid or blood—and then get out, and you have probably saved the patient's life. That is one of the conditions that is often overlooked.

The Doctor mentioned two cases that terminated fatally after operation was performed. I think we are inclined in these case to forget the free interval as being the most characteristic feature of cerebellar hemorrhage. Of course you have a slow pulse and other symptoms, but we must remember that we can have serious lesion without external evidence and that a great many times these cases go to rapid death. So if you get symptoms that indicate you are dealing with a case of this kind I would not hesitate to do an exploratory operation, and if you find anything, do a decompression, get out, and you will often succeed in saving a life.

Dr. H. R. Shands (Jackson): Knowing the excellent and conservative work that Doctor McLean does, I feel we should give due consideration to this subject. Only two points I want to make. One is that not every head injury of any sort is an operative condition. I want to emphasize that there is no indication to operate upon a fracture of the skull unless certain conditions exist. The mere fact of a linear fracture of the skull is not an indication for operation. Unless you have localized pressure as indicated by paralysis, or increased intra cranial pressure, a decompression is not absolutely indicated. With hypertonic salt solution, with heavy doses of

Epsom salts, with lumbar puncture, it is possible to treat these cases, and it is sometimes wiser to do that than to do a subdural decompression. My experience has not been vast in this line of work, still my reading tells me that the subtemporal decompression that was first introduced by Cushing probably does not occupy the high place in head surgery for general trauma, following head injury that it did eight or ten years ago. I read an interesting article not long ago by a Philadelphia surgeon in which he advises to go slow in a decompression, which is by no means a slight operation.

I think these cases should be studied very carefully, and we should bear in mind that there is an indication for waiting unless you have absolute evidence from X-Ray or spinal puncture, examination to show some localized pressure—something to show that it is not just a shaking up of the brain from general trauma.

## EPIDEMIC VOMITING IN CHILDREN\*

M. S. PICARD, M. D.,

SHREVEPORT, LA.

I do not know that this condition I am describing exists as separate clinical disease or is but an exaggerated special symptom of certain epidemics. I know that it does not belong to the epidemic influenza disease as this is not the first epidemic I have gone through. Two appearing before the epidemic of flu 1918-19. In the gastro-intestinal type of flu we had similar symptoms but this was found only in scattered cases—a case appearing here and there; but in the condition I now describe, child after child is attacked with the same clinical picture, whether this condition is to be called gastro-intestinal form of grippe or epidemic type of vomiting, remains to be separated. I am inclined to believe after going through several epidemics that this is an independent, self-standing disease though it seems to be more often present when grippe is prevalent.

The nearest approach to this epidemic is that of epidemic acidosis reported by Park of Birmingham and Metcalf of Concord, Conn. I have been unable to see the articles of Park or Metcalf but Racheferd describes practically the same condition as seen by me. Acetone is found in the urine of all cases but I feel that the acetone is the same acetone type that is found in any condition of inanition or hunger acidosis. Scant mention of gastro-intestinal form of grippe or epidemic vomiting is found in any text book. A survey of the different text books find only these conditions mentioned only under flu.

Pfoundler and Schlossman mention under influenza. In infancy the infant vomits and has slight diarrhea. Dunn gastro-intestinal form of flu, nausea, vomiting, abdominal pain, diarrhea and a tendency to collapse. Fisher—In young children and nurslings, violent vomiting associated with diarrhea may be the initial symptom. Feer—during an epidemic of flu or influenza, the older members have bronchitis, the children have diarrhea. Finkelstein—describes Brec grippe—vomiting type of grippe. These are cases of violent onset leading to apathy, clouded sensorium, inanition, dehydration leading in many cases to fatal ending. Holt—gastro-symptoms associated with influenza, we have not seen other than those associated with any other febrile disease.

The disease appears usually in the fall and winter. The epidemic usually starts in December and reaches the apex about 15th of January and gradually declines. The number of cases seen daily are from four to six.

*The incubation period* is very short—one or two days—three days at most. Longer incubation period is seldom seen. A high degree of susceptibility does not seem to exist outside of institutions. It is rare to see more than one case in a family, perhaps this is due to the age and susceptibility. The most susceptible period seems to be between one and two years. I cannot recall a single infant under six months. I have seen isolated cases at 10 months—five, six and nine years. The younger the infant, the milder the disease.

*Symptoms:* The onset is usually abrupt—the attack can come on while the child is out in the yard playing or wake up suddenly in bed. It comes without warning or premonitory symptoms. Little nausea is seen. One has not time to carry the child to the toilet, or if at the table it will vomit before it can be removed. The condition always starts with vomiting as the initial symptom though a few may complain of feeling badly for a few hours or a day. The first twenty-four hours the vomiting is violent and continuous—the child being unable to retain anything—not even water.

The second day the vomiting decreases in frequency and in many cases the attack is over and in those cases in which the attack continues, the child is able to retain a little water on the second day and a small amount of food on the third day. There is occasional vomiting on third day. The recovery in a few cases is pseudo recovery which takes place. The patient vomits for

\*Read before the Louisiana State Medical Society, April 22-24, 1924.

one or two days. There is one or two days interval free from vomiting then patient commences frequent vomiting again—this lasts for one day. The longest duration of vomiting I have seen in any epidemic was seven days.

*Temperature* as a rule is not common only in one-third of the cases, and this is not very high—100-101. The remainder have normal temperature. Seventy-five percent have normal stools. The remainder have moderate diarrhea. The number of stools average from three to six in twenty-four hours. The stools are thin and green, if the child is taking milk, curds are seen. Blood is seen only in cases over treated with purgatives. I have seen two such cases. The pulse is only slightly increased. Children do not appear very sick unless the child vomits four, five or six times in rapid succession which produces a picture of exhaustion; but this is only a temporary change—in a few hours the child is bright again. The urine is normal except for acetone which is found early in disease. At the beginning of the disease there is slight leukocytosis—at the end there is a decrease in the number of leukocytes; however, not a leukopenia. The lymphocytes slightly prevail.

No nervous symptoms seem to prevail nor do any complications seem to appear. The thirst is not intense except in those cases where large doses of soda is given. The prognosis is good. I have never seen a fatal case or a severe one in these cases. All respiratory symptoms are absent. One attack does not give immunity—and there are a few medical cases in which the child vomits only two or three times.

*Diagnosis:* This condition must be diagnosed from acidosis, meningitis, appendicitis, tubercular meningitis. In acidosis or acute acid intoxication, there is severe uncontrollable vomiting—acetone in breath, early appearance of acetone in urine. Temperature 102-103 or more—slight intestinal disturbance. After twelve to twenty-four hours the vomiting takes place at longer intervals—some food and water may be retained. If the condition does not improve, there is apathy, drowsiness and the child reacts sluggishly to its surroundings—there is clouding of the sensorium, dyspnoea and air hunger appear. In severe cases marked prostration, shallow respiration and rapid—then death. In mild cases, drowsiness gradually passes and vomiting ceases, acetone slowly leaves the urine and the patient recovers.

Appendicitis by the acute onset, ab-

dominal pain, rigidity of right side, leukocytosis. Meningitis by the opisthotonus—Kernig appearance of the spinal fluid. Acute intersusception by the severe vomiting, rapid appearance of collapse, bloody stools and abdominal distention.

*Therapy:* No treatment is necessary after one is assured that the disease belongs to the epidemic vomiting. Sodium Bicarbonate is absolutely contra-indicated as mentioned before. The only cases I have seen with intense thirst were those in which large dosages of soda were given. It is best during the first 24 hours to stop all food—giving water in small quantities and crushed ice—after that food can be offered at long intervals. There is nothing to be gained by starving the child during the second twenty-four hours. If the child retains one feeding that is so much gained—feedings do not seem to influence the number of vomitings.

I had the opportunity to observe a small epidemic at the Rescue Home, and I want to thank Miss Mason, the Superintendent, of that home for making brief histories; also Drs. Ellis and Butler for the laboratory work.

Paul Smith—age 5 years—complained of pain in stomach, refused food, the sight of which nauseated him, vomited for two days continuously, commenced to get better on third day. Temperature 100, white count 16,250. Hem. 80—Differential count—P. 83—LL 2, SL 15 Urine normal acetone.

Henry Smith—age 2 years—Monday afternoon woke from nap nauseated, vomited often until weak and exhausted. Temperature 100 3-5—vomiting lasted for three days. White count 5,500—Hem. 85—Differential count P 57, LL 10, SL 33. Henry woke about 2 A. M. on Thursday morning nauseated, vomited five times from that time until 12 o'clock the next day. First twenty-four hours bowels moved 18 times. Temperature 101 2-5. Friday bowels moved 8 times, temperature 101. White count 1,325, Hem. 75. P 80—LL 15—SL 5.

Frederick Austin—age 17 months—refused 6 o'clock supper, began vomiting at 7:30, continued until noon Tuesday—was completely exhausted. Temperature, Bowels normal R. C. 4,300.

Gladys Ross—age 17 months—Woke 9 P. M. Tuesday vomiting twice, then once, Thursday once, Friday bowels moved three times. Temperature first day 100 4-5. White count 6,500 Hem. 85 P 59, LL 22, SL 19.

Bertha King—age two years—began vomiting Wednesday at supper, once more that night, once each of the following days for 3 days, then constipated.

Harold Simmons—aged 16 months—Thursday 9:45 while playing in the yard began vomiting and continued same until 7 p. m. Friday operated 5 times, temperature 100.

In this institution there were ten cases—all occurring within a week—no sporadic cases occurred later.

## DISCUSSION

Dr. Maud Loeber (New Orleans): I would like to ask the Doctor how he differentiates ordinary cyclic vomiting from these cases of epidemic vomiting.

Dr. C. C. De Gravelles (Morgan City): We have just had such an epidemic. In only one thing did it differ from what the Doctor has described. He said he had no cases in infants under eight months. In a period of three weeks I had 63 cases of this vomiting, and quite a number were in small infants. In fact I lost four cases in children under one month old. Most of these cases were taken very suddenly and the vomiting was persistent until death ensued. They were simply dehydrated. Some few cases were older children, the oldest child being three years old. I managed to get urine from ten of these children and in each case I found quite an extensive acetonuria as well as indican.

Most of these cases recovered in three or four days. In regard to treatment my best results were obtained by giving frequent large doses of citrate of soda. Vomiting would usually cease in from six to twelve hours.

Dr. M. S. Picard (Closing): In regard to psychic vomiting, there you get a history of repeated attacks, of recurrent vomiting. But in this type of vomiting that is the primary symptom. Lots of the children had never vomited before. We have never had a death in these cases, and I have observed about six of these epidemics. I have seen true acidosis in which there was vomiting, and in which death occurred; but not at the time of these epidemics of vomiting.

## THE SURGICAL APPENDIX: ITS SIMULATION AND DIFFERENTIAL DIAGNOSIS\*

THEODORE T. BATSON, M. D.,  
HATTIESBURG, MISS.

Pain and tenderness in the abdomen, even in the right iliac region around McBurney's point, may present multiple difficulties and possibilities. Particularly, pain in the abdomen is so common that we can attach no significance to it unless it is extreme and sharply localized.

The local signs of pain, tenderness, muscular spasm and tumor, with general and constitutional signs of fever, chills, rapid pulse, vomiting, constipation, frequency and sometimes retention of urine, with leukocytosis, usually cause us to suspect appendicitis. Diagnosis, beyond suspicion, means to me a careful consideration of many probabilities, with elimination of all other causes, finally to rest upon appendicitis—a plan of ruling out or eliminating in order to arrive at differential diagnosis. We all know the usual subjective symptoms and objective signs of appendicitis and resort

to these. The most valuable are the objective signs, for various reasons, and certain of these signs are outstanding features. The trouble presents itself when the exception to all rules occurs and there is no outstanding feature.

In 1750, 1812, 1827 and 1848, cases of appendicitis were reported, and as early as 1827 surgery was mentioned as a proper procedure. Doctor Reginald Fitz in 1886 persuaded the world that the appendix is the real seat of most inflammations which occur in the right iliac fossa, although for the previous half century the general view was that the seat of the trouble originated in the caecum and not in the appendix. It is now established that such terms as typhlitis and perityphilitis are almost relegated to obscurity, since these conditions are extremely rare.

The structure of the appendix is particularly liable to infection because of the large amount of lymphoid tissue in its makeup, because of its dependent position causing bacterial invasion, and because of its poor blood supply, which renders it easily blocked by kinking or swelling of the mucous membrane. The disease is four times as common in males as in females, not infrequent in childhood, most common in the young and the middle-aged, and rather extremely rare beyond the age of 60—so much so that some surgeons have said they have never seen a case beyond 60.

Being a bacterial disease the inflammation is dependent upon the action of pus cocci occasionally, but most commonly upon colon bacilli after stagnation, irritation or kinking.

For the purpose of this paper the classification of acute, subacute and chronic appendicitis, with local abscess or general peritonitis will suffice. However, it is well to follow the course of the standardized hospital where detailed pathological diagnoses are submitted that we may be stimulated to more careful diagnoses and checks.

In order to be certain that we are dealing with a surgical appendix there are two main considerations: (1) Is it appendicitis? (2) When to operate? It means a thorough crusade against all apparent offenders of the right iliac fossa, and a positive conviction of the real offender—the appendix. A carefully written medical history should be taken. General physical examination should be made—heart, lungs and abdomen—to verify all other normal conditions and relations. A routine Wassermann is never inadvisable; the

\*Read before the Mississippi State Medical Association.

urine should be studied and blood pressure taken. Particularly do we value the examination of the lungs as a routine to eliminate pneumonia and pleurisy. I wonder how many of us here can recall cases so operated. Were there a suspicion of lung involvement I should surely resort to a radiograph of the lungs for elimination, or to better conclude when it is time to operate should there be appendicitis. With this I should combine all history and blood work familiar to us all, as an aid to early diagnosis, since I believe it is agreed that early operative procedure is in order in acute appendicitis. However, the diagnosis is not always as certain as some would have us believe. If in doubt, and all other possibilities being eliminated, I believe an exploratory is justifiable. Suppose at any examination of

A. A case with acute onset, we are suspicious of appendicitis and all symptoms and signs are not conclusive; we must decide if it is appendicitis. We may think of (1) stone in kidney (2) floating kidney with Dietl's crisis (3) enteritis (4) menstruation (5) extra-uterine pregnancy (6) typhoid (7) pyelitis, valvular (8) acute cholecystitis (9) stone in ureter (10) nephralgia (11) typhlitis, and (12) intestinal obstruction.

B. In the chronic case we must think of (1) floating kidney (2) malaria (3) chronic gall bladder (4) visceroptosis (5) mesenteric pull of right hernia (6) chronic phlebitis (7) stricture of ureter (8) foreign body in appendix, as a pin or worm.

C. As differentiated from abscess (1) fibroid (2) pus tubes (3) twisted ovary (malignant sarcoma, or degenerated cyst) (4) pregnancy (5) worms (6) fecal impaction (7) hydronephrosis (8) pyonephrosis (9) psoas abscess.

D. In the case of probable suppurative appendicitis with general peritonitis, we think of (1) non-specific salpingitis with peritonitis, or later ruptured pyosalpinx (2) acute gonorrhoeal salpingitis or pyosalpinx ruptured (3) ruptured extra-uterine pregnancy (4) ruptured ulcer of the stomach (5) ruptured typhoid ulcer.

Our first step in the differential route is the detailed history of the case. It is best written for a check, study and reference and should embrace complaint, family history, personal history, venereal history (and if a woman M. H. and marital history), onset and source of complaint; then physical examination is made, total and differential blood counts and urinalysis. Every operative case requires urinalysis

as we all know the absence of blood in the urine makes certain of no stone in the kidney as the cause, even with leukocytosis. A floating kidney presenting Dietl's crisis is best discovered in our routine examination and concurred in by negative laboratory findings, except blood probably in urine. Menstruation with dysmenorrhoea is best eliminated by history, and absence of temperature. Enteritis may even give a greater leukocytosis than appendicitis and as much temperature. Usually there is not constipation.

The greatest differential point between extrauterine pregnancy and appendicitis is the rapidly progressive leukocytosis and poly increase. Here the bleeding and vaginal as well as rectal examination would aid us. Typhoid runs relatively a higher temperature than appendicitis while the abdomen is soft. There is also leukopenia. In pyelitis the urine is diagnostic.

An acute gall bladder may be confounding. Fortunately the pain and tenderness may localize in that region. Acute typhlitis is rare and perhaps is the least of confusers. A stone in the ureter would give us blood in the urine, or the X-ray may be used, as in the kidney. Nephralgia would give us more pain in the loin than in fossa. In intestinal obstruction there may be fecal vomiting with tumor.

In the chronic cases as differentiated routine we must feel for the floating kidney. Cystoscopy and X-ray are in order with this and with stricture of the ureter. Malaria is often confusing. I recorded some 40 cases sent for operation in one year while I was the admitting officer at the Charity Hospital in New Orleans. The routine feeling of spleen and concurrent blood work made, the diagnosis. Visceroptosis with stagnation is best demonstrated by X-Ray. A right hernia of the huge type which pulls on the mesentery may give chronic pains and should be investigated before convicting the chronic appendix. Again, a chronic typhlitis may prove a barrier to diagnosis, except that it is a fortunate rarity. Foreign bodies, as worms, pins, shot, fecal concretions or calcifications, are usually discovered at operation or by X-Ray.

The fibroid, pus tubes, a degenerated malignant twisted ovary or ovarian cyst, and pregnancy, may prove troublesome. Observation of these cases is in order if the usual methods do not suffice. I have seen a bolus of worms in the right iliac region referred for operation. The appearance of the child (without tempera-

ture) and blood and fecal examination made the differential. Fecal impaction is not uncommon, but readily eliminated unless there is obstruction with regurgitation. Cystoscopy and X-Ray serve best in hydronephrosis and pyonephrosis. Fortunately, psoas abscess is cold and without leukocytosis perhaps.

As differential of suppurative appendicitis with peritonitis from ruptured non-specific pyosalpinx, the history and course would help us; otherwise we should rely on exploratory as in the gonorrhoeal type. The vaginal smear is in order always. The ruptured extra-uterine pregnancy gives us the signs and symptoms of shock and hemorrhage and the most rapid increase of leukocytes. Ruptured ulcer of the stomach is detected by history and the extreme rigidity of upper abdomen. The course determines the ruptured typhoid ulcer—the history and progress.

In conclusion, having determined appendicitis I should:

1. Operate early, within 24 hours.
2. After 24 hours I would not operate, but would rest the case until normal, unless there was progression toward a worse stage.
3. I would not operate immediately on any case whose temperature was not over 100 degrees, with pulse in proportion and other conditions being satisfactory.

#### DISCUSSION

Dr. R. H. Foster (Laurel): I have in mind three conditions that I do not believe the paper mentioned, although the Doctor seemingly covered the subject fully. They are: meningitis, orchitis, and ruptured spleen—all diagnosed as acute appendicitis. I had a case of meningitis that came in with a leukocyte count of 22,000 to 24,000, temperature 100.5, rapid pulse, and rigid abdomen. He was sent in an ambulance five miles over rough roads, and when he got to the hospital his abdomen was not rigid, but he had a high leukocyte count and rapid pulse and temperature and vomiting. Two other men saw him in consultation and decided that he had a ruptured appendix, that it had just ruptured, and advised going in to remove the appendix. removed a perfectly normal appendix, but the man died two days later of meningitis.

A case of ruptured spleen came in diagnosed as acute appendicitis. I was satisfied it was not the appendix and kept him under observation. Two or three days later as I was going through the ward I noticed this man bending over and holding his abdomen. He said the pain had just struck him. I told him to lie down, but he could not do it. He had a rapid pulse, subnormal temperature and rigid abdomen. I thought of perforation, of gastric or duodenal ulcer, but on opening the abdomen we found a ruptured spleen—you could put three fingers inside the spleen. He had never had typhoid or malaria and had never suffered from traumatism. What caused it I do not know, but we removed the spleen.

The man recovered and is living today, as far as I know.

The third case was one in which I was called in consultation in the hospital, and the doctor told me he had a man with appendicitis. When I turned back the covers and looked at his abdomen and felt it I was suspicious immediately. I asked the man if he had had a venereal disease, but he said No. On examining him I found he had an orchitic on the right side with pain referred to the lower right quadrant.

Dr. H. R. Shands (Jackson): I want to congratulate the essayist on his very careful paper, and to bring out one point on which I think he is really confusing. I might illustrate by saying that we have had occasion a number of times to say that the thing most necessary is not a good doctor, but a careful doctor. I say that because since I left here this noon I have removed an abscessed and gangrenous appendix from a gentleman who was examined yesterday by a surgeon whom I think is one of the best and most careful surgeons in Mississippi. This man consulted him for rheumatism, and he looked at his tonsils, but evidently he did not look at his abdomen, because this abscess must have been forming for a week or ten days.

I am sure we cannot do better than to have a routine procedure in the examination of our patients, and take the time to put each patient through that routine. In this connection I would like to say that I would like to give some advice that has been wonderfully helpful to me. I am not the agent of any medical journal, but I get more real help from reading each week the Boston Medical and Surgical Journal, in which are reported Cabot's case records from the Massachusetts General Hospital, than from any other periodical. Each week they report two medical and one surgical cases that are worked up in that hospital and on which a postmortem is held. For several years I have been reading this journal and it has been a great help, because, as Doctor W. J. Mayo says, the Massachusetts General is the best hospital in America. To read each week a well worked up case which has been studied at postmortem, tends to make one a little more careful. One point the Doctor brought out is care in diagnosis. I think 99 cases out of 100 of acute appendix can be diagnosed if we use the knowledge that we have on trying to make the diagnosis. But the trouble is we do not always do that.

I would like to ask the Doctor what his statement was in regard to operating when the temperature is over 100 degrees.

Dr. Batson: I said I would not operate immediately if the temperature was not over 100, with the pulse in proportion and other conditions being satisfactory.

Dr. Shands: I take exception to that because I am sure I have removed more than one appendix with a good deal of pus that had a perfectly normal temperature. I think in the average case we see the temperature is less than 100 degrees. Forty per cent of cases have normal temperature and badly inflamed appendix. So I want to take exception to that statement.

Dr. J. G. Gardner (Columbia): I think the paper was very fine, and I am perfectly free and frank to say that I think Doctor Shands was talking about me a moment ago. An old man came down to our clinic yesterday with arthritis. We examined him and he was to come back Friday. He did not have an acute appendix at that time. His white blood count at that time was 7,200; he had infected tonsils and our man pulled the

pillars forward and there was pus. A smear was made which showed streptococcus infection. This brings to mind the fact that the most frequent cause of appendicitis is streptococcus infection. I do not know whether this is true—I have not seen the man—but may it not be that separating the pillars a little bit allowed the streptococci to get into the circulation and they went down to the appendix? If they have a laboratory report I would like to know what kind of infection showed. I believe that most of our cases of appendicitis are infectious, and I believe the infection gets in through injury to the tissues and also through lack of physiological defense in the tissue itself.

The Doctor brings out the point of not operating unless the temperature is 100. Our method is that when we know a patient has an acute appendix with high blood count, we operate—unless of course the condition is such that we think the patient could not stand it. We operate on lots of patients with a temperature of less than 100, and lots with a higher temperature than that.

One of the most important things is differential diagnosis in pneumonia. This should be looked for in every patient before he is put on the table.

Dr. C. C. Hightower (Hattiesburg): The essayist has covered most of the ground, but he left out one condition that I had in my practice about a year ago and that I think is worth while. At first this appeared to be a typical case of appendicitis—rigid on the right side, very tender, high blood count and fever. We opened the abdomen expecting to find an abscessed appendix, but we found the omentum covering the appendix and on pulling it out we found a perfectly normal appendix. Then I knew I had missed my diagnosis. I made a large incision upward to the gall bladder region. The omentum was thick and agglutinated; we thought of abscess in the upper abdomen, but did not find it. It proved to be a case of complete torsion of the entire omentum. There were three twists in the entire omentum. It was removed in conjunction with the colon and the patient made an uneventful recovery.

I have operated in a majority of these other complications he mentions several years ago, but not lately. I have operated for appendicitis that proved to be pneumonia; one that proved to be a ruptured duodenal ulcer; also a case of stone in the right kidney and pelvic peritonitis. These I happen to remember that proved not to be appendicitis.

Three days ago I was called to see a patient who had violent pain in the right side over McBurney's point. He was rigid as a board, but had no fever. I took him to the infirmary and had a blood test made and an urinalysis, and everything was negative. I decided to wait awhile. Six hours later the urine showed many red blood cells. That afternoon the patient was well and the next morning went home. I did not make any further examination because he did not care to go to further expense, but that was undoubtedly a case of stone in the right ureter. If we always remember our former experiences we will not repeat them.

In regard to operating, I believe the only thing we should be absolutely sure of is that it is appendicitis. If it is, operation is the only method of treatment.

Dr. V. B. Philpot (Houston): The diagnosis of appendicitis is not always easy, especially the chronic condition. I just want to mention one or two points in these cases that may aid in diag-

nosing these conditions. I do not think there is anything that will show up as quickly under deep pressure as appendicitis, and of course in acute cases there is rigidity of the rectus muscle. Tenderness need not be over McBurney's point, but wherever the appendix may be located. In this connection X-ray pictures following a barium meal helps to locate the appendix, if you find tenderness in keeping with the location of the appendix as shown by the picture, you can be sure of appendicitis.

As to the operation, I have always made it a rule to operate when the diagnosis of appendicitis is made regardless.

Dr. E. H. Linfield (Gulfport): I want to mention one point which the essayist brought out and that is foreign body in the appendix. I am sure many of you have seen cases that were operated for acute appendix and when you got into the abdomen you found hookworm or some other parasite. That, of course, is embarrassing to the surgeon but he can always get around that by making a differential blood count before operation. Of course it is possible to have an acute pus appendix with intestinal parasites, but many patients are operated for appendicitis when the cause of the trouble is intestinal parasites, either hookworm, groundworm, or tapeworm. I remember when I was in Touro we always made a routine total and differential blood count when a patient was admitted, and on several occasions I got patients from the train on an ambulance, cases sent in from the country by some physician who said it was acute appendix and to operate immediately. When the patient was admitted the interne took the total and differential. You do not get a high total count or a high poly count, but you usually find a high eosinophile count in these parasite cases. Then we would examine the stool for the presence of parasites, and if found we would give a specific and the appendicitis would subside. I just want to urge you to pay attention to that point particularly because you all make that mistake.

I remember a case that was admitted to the hospital on Dr. Matas' service in Touro. This man had all the objective signs and symptoms of a very acute appendix, malignant type. The blood count was absolutely as normal as a perfectly healthy man, and this man's pain was under the left costal border. But the abdomen, Dr. Matas seemed to think, was that of acute appendix and he operated at McBurney's point, and found an appendix that was just on the verge of rupturing. So an acute abdomen will frequently prove that the pain can be recorded in different places.

Dr. T. T. Batson (closing): Because I do not speak loudly I may not have been heard, but I mentioned pneumonia and pleurisy as among the possibilities complicating the diagnosis of acute appendix.

My idea is to divide these cases after diagnosis into resting cases and immediately surgical cases—operation within 24 hours if it is an acute appendix, otherwise throwing these cases into the resting stage as we would in salpingitis. By comparative statistics we find that the phlegmon is somewhat absorbed and the operation simplified as the result of these cases having rested.

I did not mean to say that I would rely upon one temperature or one blood count in determining my diagnosis. This should be repeated at intervals, and if the progress was not satisfactory, if the pulse did not remain in proportion to the temperature, then the resort would be to operate before resting.



New Orleans  
**Medical and Surgical Journal**

*Established 1844*

Published by the Louisiana State Medical Society under the jurisdiction of the following-named Journal Committee.

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*For Mississippi.*

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**SUBSCRIPTION TERMS:** \$2.00 per year in advance, postage paid, for the United States; \$2.50 per year for all foreign countries belonging to the Postal Union.

Material for publication should be received not later than the twentieth of the month preceding publication. Orders for reprints must be sent in duplicate when returning galley proof.

THE JOURNAL does not hold itself responsible for statements made by any contributor.

Communications should be addressed to: *New Orleans Medical and Surgical Journal, 1551 Canal Street, New Orleans, La.*

**THE CHARLATAN PROCTOLOGIST**

Probably no branch of pathology, according to Halton, suffers more from the charlatan and the quack than that pertaining to rectal diseases. Indeed a large part of the rectal cases that come to the specialist who has devoted his time for years to a study of this branch of human suffering and its alleviation have first been treated by the druggist and patent medicine vendor, then by the general practitioner or a fake advertising specialist. The charlatan in medicine is an impudent pretender to the healing powers he does not possess. The quack is an ignorant charlatan.

Both terms are often wrongfully applied to irregular practitioners, the thousand and one graduates of Class A colleges legally registered in their different States; the advertising M. D.'s; the mail order M. D.'s, and last, but not least by any means, the advertising rectal specialists or proctologists.

Why is the charlatan proctologist, and who is to blame for his success? What are his methods of treatment and of procuring

patients? Naturally the non-operative treatment of hemorrhoids is the most prolific field for the proctologic quack.

The bare mention of "operation" or "knife" is abhorrent to many people. By the nature of things the patient is not keyed up by the more or less public exploitation of his or her pain and suffering. It is one of the ailments which Victorian conventions compel us to carry in smiling silence. Promises of painless cures, bloodless cures, and cures without detention from business sound good to the prospective patient who will accept the advice of a charlatan and place himself under his care rather than undergo the slight operation the case may demand.

This is not a plea for the injection method of hemorrhoids, though wonderful results accrue therefrom.

Of course there are tricks in all professions as well as all trades and the hard-working ethical physician and surgeon knows little of the tricky methods that have made wealth for hundreds of so-called rectal charlatans, men who are using secret formulas and selling the same along with their special technique and instruments.

It is the aim of the charlatan and quack to create in their patients a feeling of awe—to impress them with the idea that the operator is possessed with psychic power and almost supernatural knowledge. It is due to the credulity of the people in general and his own blatant effrontery that the charlatan is a success in the matter of money getting. The public is always on the lookout for something out of the ordinary, something hidden and mysterious and the more nearly it approaches the magic and the occult the harder they fall. And this goes with a certain class of newspapers as well. There is no news in the fact that the physician effects cures by the dozens and scores 365 days in the year. That is what he is employed for and the public never hears of it. But let it be reported that a lame girl has thrown away her crutches or a blind child been given sight by the laying on of hands of some itinerant quack, it would be spread before ten thousand readers without investigation and believed without investigation.

**INTERNATIONAL CONFERENCE TROPICAL HEALTH PROBLEMS**

An International Conference on Tropical Health Problems was held at Kingston, Jamaica, July 23 to July 31 inclusive. This

conference was called by and held under the auspices of the Medical Department of the United Fruit Company. The conception, organization on such a comprehensive scale, and the complete success of the conference was due chiefly to the alertness, wisdom, ability, leadership, and genial good nature of Dr. W. E. Deeks, the Director of the Medical Department of the United Fruit Company.

There were 57 delegates from 17 different countries. Most of these were men who have taken special interest in some phase of tropical medicine, and many are world authorities in their particular line of work. Among them may be mentioned Dr. Aristides Agramonte of Havana, the only living member of the Reed and Carroll yellow fever commission; Col. Bailey K. Ashford of San Juan, Porto Rico, who was a member of the Porto Rico Hookworm Commission which did such important work on this disease in the early days of its recognition; Dr. Henry R. Carter, world authority on yellow fever and its control; Dr. Aldo Castellanni, professor of mycology in the London School of Tropical Medicine, and author with Chalmers of the standard textbook on tropical medicine; Professor Friedrich Fulleborn, head of the Hamburg (Germany) School of Tropical Medicine; Dr. Hideyo Noguchi of the Rockefeller Institute for Medical Research, discoverer of the cause of yellow fever; Sir Thomas Oliver, Newcastle-upon-Tyne, England, authority on industrial hygiene; Sir Leonard Rogers, London, authority on amebic dysentery, pioneer in the use of emetine in its treatment and authority on leprosy; Dr. Milton J. Rosenan, head of the Harvard School of Tropical Medicine; Dr. George E. Vincent, president of the Rockefeller Foundation; Dr. C. C. Bass and Dr. F. M. Johns of Tulane, and many others.

The papers presented covered a wide range of diseases prevalent in the tropics, and those of special interest in tropical countries. Time was allowed for liberal discussion. Among the subjects widely discussed were malaria, leprosy, schistosomiasis, yellow fever, amebiasis, and other forms of dysentery, plague, granuloma inguinale, ainhum, pinta, filariasis, sprue, oriental sore, mycosis, leishmaniasis, alastrime, etc.

Space permits brief mention of only a few of the points brought out. The discussions and subsequent visits to United Fruit Company Hospitals indicate that malaria remains one of the most important diseases of the tropics. No new method of

dealing with the disease was brought out. Old methods were discussed. As for treatment quinine remains the chief if not only remedy.

Sir Leonard Rogers pointed out the great reduction and almost complete elimination of liver abscess resulting from the widespread use of emetine in the treatment of amebic dysentery. He also directed attention to the wisdom of treating amebic liver abscesses by aspirating the contents and by giving emetine at the same time. Opening such abscesses is not desirable. Where necessary the liver may be exposed and then contents of the abscess aspirated. This followed by treatment with emetine is very successful.

The evidence in support of the claim that Noguchi's leptospira icteroides is the specific cause of yellow fever, seemed to be complete, and to prove to the satisfaction of practically all that it is the true cause. The value of the prophylactic vaccine made from this organism and the curative serum remains to be determined, but evidence so far is favorable.

With regard to leprosy, continued work with products from chaulmoogra oil and lately cod liver oil, produce apparent cures in an increasingly large proportion of cases, not in all. The lepra bacilli in the cases under treatment usually break down, become granular and later disappear.

Ashford still believes monilia psicosis bears an etiological relation to spruce. The final proof is lacking.

After the conference, the delegates visited the United Fruit Company Hospitals, plantations, and other places of interest in Jamaica, Honduras, Guatemala, Costa Rica, and Panama. Perhaps the most important feature of the whole conference and tour is the fact that this large commercial organization has recognized the importance of health to the success of their business, to the extent of making the large investment in it that the cost this conference must represent.

#### THE JOURNAL—THE OFFICIAL ORGAN

The *Journal* is the official organ of the profession of Louisiana and Mississippi and can now lead in plans to those ends which will conserve the best interests of our States. If given the help and encouragement of the physicians individually and collectively we can accomplish much.

We are not unmindful of the trust confided to us, and we shall try to live up to our responsibilities as honestly conceived. When the time comes to pass on some mat-

ters the obligation weighs heavily, and we hope our readers will remember we are doing our best.

The papers read before the State Medical Societies of Louisiana and Mississippi and the Orleans Parish Medical Society are the papers (property) of the *New Orleans Medical and Surgical Journal*. Through these organizations the *Journal* has more material than it can possibly publish during the year, therefore local societies must not feel that they have been treated with indifference when papers sent by them are not published. Through the news columns we shall endeavor to treat every society in Louisiana and Mississippi with fairness and justice, without favoritism to any.

With the hospital facilities, the faculties of Tulane and Loyola and two post-graduate schools, there should be no better advantages for the teaching of medicine than New Orleans offers. We have the material and the men. We ask the help of every well wisher and solicit contributions in the nature of live, up-to-date editorials for publication. We shall be glad to initial the editorials, if furnished, or sign the full name, as may be desired by the author. Tulane and Loyola, with their numerous associates and assistants, could be wonderfully helpful, and it is believed this would tend to bring back home those of their honored Alumni who have sought other fields for their activities.

The Publication Committee asks for the hearty and cordial support of every member of the profession in Louisiana and Mississippi. Let us make it 100 per cent for all in good standing. If your neighbor is not a member of the local medical society, ask him to join. If he is not disposed to join the organization, ask him to subscribe to the *Journal*.

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#### EXCHANGE SPEAKERS

An unusual procedure which is proving to be very successful is the plan adopted by the Ouachita Parish Medical Society and the Shreveport Medical Society of exchanging programs. The plan is that at one meeting the Ouachita Parish Medical Society entertains members from the Shreveport Medical Society, and at a subsequent meeting the Shreveport Medical Society entertains members from the Ouachita Parish Medical Society. This plan has been adopted very recently, and consequently only a few meetings have been held. This gives an unusual opportunity for the medical men to become acquainted with their adjoining brothers, and to in-

terchange ideas concerning scientific subjects, which is always most profitable.

The officers of these organizations are to be congratulated upon this progressive step. The interest manifested in the few meetings held to date, has been more than anticipated. Other parish organizations could improve the interest of its members by considering the possibility of joint meetings with some of their close neighbors. We trust that these scientific sessions will continue to prove interesting and successful.

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#### TROPICAL MEDICINE AND TULANE

The announcement of the bequest of the late William E. Vincent of \$60,000 to the department of Tropical Medicine and Hygiene, Tulane College of Medicine, and the plans for the use thereof are worthy of comment.

New Orleans, due to its climate and to the geographic location with regard to the tropical and semi-tropical countries, is the logical location for the development and study of this branch of medicine.

Present plans contemplate the founding of a Chair in Tropical Medicine in the undergraduate school with a full time professorship assisted by a Staff that will strengthen and round out the course of teaching in this department, thereby making it rank with the other branches taught in the undergraduate school.

To accomplish the purpose the Dean and Faculty are making every effort toward obtaining a recognized authority of international prominence and an interesting announcement is expected very shortly.

Future graduates of Tulane will be better equipped to cope with Disease of a tropical and semi-tropical nature than graduates of other medical schools, and their community will profit thereby.

The formation of a clinic, in one of the local Hospitals, a consultation clinic, and regional surveys will make the City the center of information, investigation and research.

An interesting course of study covering a period of two or three years, and leading to advanced degrees complete the program that is destined to rank Tulane as a foremost authority in Tropical Medicine.

Mr. Vincent's bequest will benefit Tulane and New Orleans alike, but it represents less than half the amount required to place the department on an independent basis. It is hoped that his generosity will be imitated by many so that the School of Medicine can broaden its fund of usefulness.

# TRANSACTIONS OF MISSISSIPPI STATE MEDICAL ASSOCIATION

## WHY A MEDICAL AUXILIARY?

*Woman's Auxiliary Meeting—Continued*

Mrs. S. C. Red, Houston, Tex.

The Woman's Auxiliary of the American Medical Association brings to the Mississippi State Medical Association a most cordial greeting and assures you of its deep interest in your deliberations. Personally its president comes to you a total stranger, but does not bring with her a strange message. It is the old but ever inspiring message of love, love for and pride in the medical profession.

The object of the Auxiliary, as stated in its constitution, is to extend the aims of the medical profession through the wives of the doctors to the various organizations which look to advancement of health and education, to assist in entertaining at all American Medical Association Conventions, to promote acquaintanceship among doctor's families, that closer fellowship may exist. Now, that object is certainly a worthy one, isn't it? And in order that it may be carried out there must be an organization back of it—so that is why I have answered the splendid invitation of the honored president of your State Auxiliary, Mrs. Daniel Williams, and come to you today to encourage and help from the experience of other States—to put your Woman's Auxiliary on a working basis. This matter will be gone into more fully at the Auxiliary meeting tomorrow.

Perhaps the things that would interest this assembly most would be the accomplishments of the Auxiliary during its two short years of existence. We were just ready for the fourth annual meeting of the Woman's Auxiliary of the Texas State Medical Association for which I had served two years as president, when it occurred to me that if such an organization had meant so much that was pleasant and worth while to Texas, why shouldn't other States be told of its benefits. So armed with a resolution from my State Auxiliary and with the encouragement and help of the most prominent men in the profession in Texas—I went to St. Louis, where the House of Delegates voted unanimously for such an organization, one delegate going so far as to suggest that we be given a vote in the House of Delegates, but that was not what we wanted. We are perfectly sure that that body is more than capable of at-

tending to its own affairs and we want no part in their deliberations, but we do stand ready to help as an auxiliary.

There are many definitions given for the word auxiliary—generally used it means an aid, a helper, an assistant. There are auxiliary troops, auxiliary engines, auxiliary verbs—an auxiliary verb is one that helps to form the voices, moods and tenses of other verbs; an auxiliary yacht is one having an engine and propeller for use when there is no wind or when the wind is adverse.

Plato says, "an auxiliary is one whose office it is to support the resolutions of the rulers. As individuals we are willing to form the moods, voices and tenses of our doctor husbands or to even act as an engine and propeller when the wind is adverse. But, collectively, we will act on Plato's suggestion and "support the resolutions of the rulers."

During the first year of our activities two letters were sent to each of the presidents of the 48 State associations asking that a leading doctor's wife be appointed to start the organization in that State, and that a representative be sent to the convention in San Francisco—eighteen States responded with approval and appointments—seventeen being represented at the first convention. At this convention the four newly elected vice presidents were each asked to take twelve States and be responsible for their organization during the next year. Mrs. Seale Harris the vice president of the Southern States reports eighteen States represented at the Southern Medical Association meeting in Washington last November. That is what the South thinks of the auxiliary. Being somewhat relieved of the details of organizations the president became interested in that clause stated in the object of the organization "viz": the extension of the aims of the medical profession through the wives of the doctors to the various woman's organizations which look to the advancement of health and education—with an emphasis on *education*. The keynote of President Wilbur's address at San Francisco last summer was the education of the public along medical lines. An article in the Literary Digest telling of the activities of the Illinois State Medical Association in the matter of ascertaining what the people think of doctors and the startling statement that out of 6,772 persons consulted

only 931 professed entire confidence in orthodox medicine. Also, the question, who is going to tell those other 6,000 persons the truth about the medical profession? brought this suggestion to my mind that here was a fine place for the auxiliary to start a real work, for who knows more than the doctor's wife how much scientific knowledge, physical strength, Christian patience and forbearance it takes to make a doctor. After consulting the president of my State Medical Association, Dr. A. C. Scott, I prepared a paper on "organized medicine," telling of the college requirements and the splendid medical schools in our States, of our medical legislation, reading our last medical practice act, said to be one of the best in the country; standardization of hospitals, explaining the difference between regular staff, closed staff and visiting staff; requirements of nurses' training school, State regulation of medical examinations; read the oath of Hypocrates and explained that branch of medical ethics which requires every honest-to-goodness doctor to pass on his knowledge to his brother practitioner; told of county, State and National Association and their efforts to advance the cause of medicine and especially their efforts toward preventive medicine, which is probably the most altruistic thing they do; fighting the very causes that will bring money into their pockets. I read this paper to my city federation of women's clubs, then to my State federation of women's clubs, as you know these clubs are made up of delegates who carry pencil and note books and carry back to their clubs the important things heard at the meetings. I also made ar-

rangements for our State president, Dr. Scott, to give his splendid talk on "What Every Woman Should Know About Cancer." At the State Federation meeting both of these talks were splendidly received and I have heard complimentary echoes from all parts of our big State. I sent a copy of my paper to all State presidents of our auxiliary, asking them to write similar papers covering conditions in their States and asked them to read it to the laity.

In closing, I would like to say that perhaps the one thing that has impressed me most in my work with the auxiliary is the fact that the average woman in education and culture. I had not realized this before; go into any town, city or metropolis, the leading women in these towns are doctor's wives, be they musicians, artists or philanthropists. Isn't there every reason why these leading spirits should be used to help in the cause of educating the public to the real meaning of medical ethics.

Now, I am just as orthodox as the worst blue stocking among you when it comes to *advertising* the profession, but in the matter of education, I feel that the profession has been, to say the least, unmindful of its needs. If the American Medical Association is in earnest about putting on a program of education, the auxiliary will stand ready to "support the resolutions of the rulers," but first and foremost is the necessity of promoting acquaintanceship among doctors' families that closer fellowship may exist. We must know and love one another before we can work together even for a good cause.

## MEDICAL ECONOMICS

*Chas. A. Bahn, M.D., Department Editor.*

### III

One dollar will become two dollars if invested and compounded at 6 per cent interest in about ten and a half years, at 5½ per cent interest in about twelve and a half years. This is all you have a right to expect of the invested part of your savings without the addition of knowledge, judgment, effort, responsibility, and risk.

If you are not satisfied with this return on your savings and are not willing to add what is necessary to make them earn more, you should do one of two things. The first is to take the amount listed for speculation on the basis of your income in the chart printed last month, speculate as quickly and wildly as possible, lose and forget it as fast as you can, that your real productiveness may not be interfered with more than is necessary. The other alternative is to speculate with this amount in your own business, because presumably you know more about your business than somebody else's business, and intimate knowledge is one of the important factors in speculative success.

Speculation is an effort to get something for nothing, or more than you have really produced. In the long run, the only persons who profit thereby are those who, win or lose, receive a commission, and those who disburse the money which the suckers contribute. Do not confuse investment with speculation; they have practically nothing in common, and do not mix as well as the proverbial oil and water.

Our object in saving is to establish a fund which will provide for us and ours during non-productiveness from increasing age, illness, accident, and death. This is usually accomplished by one fund, the interest of which will take care of decreasing productiveness from increasing age, which in medical practice, usually begins at about the age of 55; and a second fund called insurance, which in case of premature death or disability will take the place of the first fund, and in case of productive survival, will augment the first fund. Both of these funds can be best established only by regular contributions, preferably monthly.

As shelter is one of the most important factors in our lives, home ownership is usually the first practical step towards laying aside for the future. If you rent a home, you usually pay the owner about 10 per cent yearly of its value; 4 per cent taxes, insurance, and maintenance, and 6 per cent interest on the investment; and after you have lived in this home say eleven years, you own nothing but recollections. If you purchase a home through a homestead association, generally speaking, you lose the 6 per cent annual interest on the 20 per cent of the purchase price that you pay cash; you pay for about ten and a half years, approximately 13 per cent yearly on the remaining 80 per cent, the amount you borrowed; you pay the same 4 per cent taxes, insurance, and maintenance, as if you rented. At the end of ten and a half years, however, the home belongs to you, and the net interest paid on your home will have been slightly less than 6 per cent. If your purchase has been made with a reasonable degree of foresight, your home should be worth slightly more than the price originally

paid, because the increased valuation of the ground will have more than offset the depreciation of the house. Whether you have rented or bought, the use of the home has, of course, been yours during the time mentioned.

It has been estimated that generally speaking it is not wise to purchase a home costing more than two years of one's net income. If your net income is ten thousand dollars a year, it would probably be unwise to purchase a home costing more than twenty thousand dollars.

The majority of homes in this State are purchased through homestead associations, institutions of which we can be justly proud, because they are a powerful factor in stimulating regular saving, encouraging home ownership, and making savings a productive factor in the home community. For the benefit of those unfamiliar, a few fundamentals may be of service.

A company is formed which issues a certain number of stock shares usually in denominations of one hundred dollars or fractions thereof. The purchaser of this stock usually buys on a partial payment plan, obligating himself to contribute a regular amount weekly or monthly until the stock is paid for. For this amount paid in, he receives usually 6 per cent yearly interest compounded semi-annually. This income is free from all city and State tax, and federal income tax to the extent of three hundred dollars per year per individual. Thus a man and his wife in this State could receive six hundred dollars per year dividend from homestead stock free from federal income tax, this representing the interest at 6 per cent of a ten thousand dollar investment. The purchaser of this stock can also borrow against its par value, usually not exceeding 80 per cent of the company's estimated value of the ground and building to be purchased or built. On this loan our prospective home owner pays usually about one dollar every twenty-eight days, for every hundred dollars borrowed, making about thirteen dollars per hundred dollars borrowed per calendar year. In about ten and a half years the borrower becomes the full owner, having paid the loan and gross interest at the rate of about 7.8 per cent. The company therefore pays 6 per cent for money which it loans at 7.8 per cent, leaving a difference of almost 2 per cent for administrative expense and the payment of loss from within or without the organization. The company also usually has the benefit of receiving weekly or monthly payments on which interest is paid out but semi-annually.

Homestead associations are audited at least once yearly by the State Bank Examiner, whose report can be studied by any one who is interested, preferably, however, by a person conversant with accounting methods. The reports showing the financial condition of the different companies are printed from time to time in the daily press.

These organizations are to a slight degree, regulated by the State, in that the amount which they can borrow, usually from banks, is limited to one-half of their outstanding stock. They are also supposed to have a surplus fund, an accumulation of profits after all administrative expense and dividends have been paid, approxim-

ing 5 per cent of their total assets; in order to provide against loss to the stockholder.

There have been, to my knowledge, practically no losses in recent years which have resulted from the purchase of homestead stock.

I believe that at least for the savings beginner, who usually has not formed the habit of regularly setting aside a definite amount monthly for future use, and for whom investment is more or less of a mystery; that homestead associations, if selected with reasonable common sense, offer an excellent opportunity for investment. Without further effort on the investors part, they usually pay a net 6 per cent yearly dividend compounded semi-annually, which is a maximum return consistent with safety; they stimulate regular savings; they make home ownership easily possible for the average family, and they reinvest savings productively and safely back in the same community as first mortgages on homes.

In the selection of a homestead association, the following factors are worthy of consideration: age, surplus, safety margin on loans, capital stock, rate of growth, management, and other factors shown in the bank examiner's report.

In obtaining a loan from a homestead association it is generally advisable that the payments to the company be made to apply on the purchase of the stock rather than on the loan because you thus save the difference between the 6 per cent dividend and the 7.8 per cent loan charge on that

part of your payments which apply to the principal of the loan. About one-half of the amount paid is devoted to interest and about one-half to reduction of principal.

Any one who contemplates the purchase of a home can have it appraised by a homestead association in this city for about three dollars without incurring an obligation to purchase or borrow.

We are indebted to Mr. Wm. Pfaff for reviewing this month's contribution and offering valuable suggestions.

Next month we expect to discuss a few fundamentals about life insurance, this usually being the second practical step which the average physician takes in looking forward into the future.

Again we say, this is your page, conducted to help you become a better physician by stimulating interest, in an upright, straight forward way, in economic medical problems, that we may give the public the best possible value for that part of its income paid us, and on the other hand, that we may realize the greatest practical benefits from our knowledge and efforts.

If we can help you solve your individual problems along these lines, do not hesitate in placing them before us. If you like, or do not like, this department, write us, that our efforts may be directed productively.

Address all communications to Dr. Chas A. Bahn, 1551 Canal street, New Orleans, La.

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## SOUTHERN MEDICAL ASSOCIATION MEETING

Arrangements for the coming convention of the Southern Medical Association in New Orleans, November 24th to 27th, are rapidly nearing completion. Communications between the central headquarters at Birmingham and the local committee in New Orleans point to it as one of the best and probably the most largely attended meetings held by this Association.

The two Drs. Dicks, Dr. George and Gladys Dicks, whose work on scarlet fever has gained wide renown, will be in attendance. Their scarlet fever test for susceptibility, their vaccine for immunization and the twenty-four hour cure for scarlet fever are the most important medical matters presented at any of the past meetings of the Southern Medical Association. As Drs. Dicks will give clinical demonstrations in New Orleans at this meeting, and arrangements have been made to secure 100 children for this purpose, the importance of this subject should be apparent to every medical man in the South. No doubt everyone will desire to avail himself of the opportunity to see these demonstrations. The committee has also procured very interesting material for its scientific exhibits. Prominent among which are:

Motion picture microphotographs of the life cycle of *Schistosoma mansoni* and the trypanosomes of *Derrengadera*, by Dr. Juan Iturbe, Maracaibo, Venezuela.

Motion pictures and slides of the *Leptospira* of yellow fever, with microscopic demonstration of

the organisms and characteristic lesions produced by Dr. Hideyo Noguchi, New York City.

The Scientific Exhibit Committee is also making arrangements to procure still other exhibits which will be of enormous interest to the medical profession, and hopes to be able to discuss these at an early date.

As considerable interest in New Orleans has been created throughout the Southern Medical Association by a series of articles appearing in the *Journal of the Southern Medical Association* since July entitled, "Sandy Sees New Orleans," exploiting the many points of historical interest and the rapid strides New Orleans has made in education, sanitation and commerce, we anticipate a banner meeting. As this meeting bids fair to be largely attended we would therefore advise that you make early reservations so that you may be taken care of during the convention.

The scientific program will probably surpass in scientific value its previous best efforts, as witness the paper of Drs. Dicks and other papers to be mentioned later. As many of the authors attending this meeting are of a standing to command authority throughout the United States, the scientific value of their papers must be unquestioned. The halls for the housing of these sessions have been arranged so that everyone will be assured of attendance and comfort. The Entertainment Committee has been very active and has prepared a series of functions for yourself and the ladies of your family which will keep you busy all the time. By the way, don't forget your golf clubs!

# NEWS AND COMMENT

*Lucien A. Ledoux, M. D., Department Editor*

"Every man owes some of his time to the up-building of the profession to which he belongs."  
Theodore Roosevelt."

## MONTHLY BULLETIN OF THE ORLEANS PARISH MEDICAL SOCIETY

The activities of the Society will be resumed with a Scientific Meeting, Monday, September 22nd, 1924.

The following applications for active membership have been received: Drs. F. R. Brunot, Mary Gould, Frank Cato, Jr., Corinne R. Cato, J. A. Colclough, Edmond Faust, Edward McCormac, Dorothy Edwards, Charles T. Williams, Katherine Havard, Abram Weiss, Maurice Compagna and L. J. Stookey.

The Board of Directors have recommended to the Society that a new membership class be formed, viz; Interne Memberships, the dues to be \$6.00 per annum.

The dues for the Fourth Quarter are now due and prompt remittance will facilitate the work in the office.

While the Society is enjoying one of its best years, and its membership is larger than in former years, every effort should be made toward securing desirable applications from physicians located in the city to replace losses caused by deaths, transfers, etc.

November 24th to 27th this Society will be hosts to the Southern Medical Association. The Committees have been actively at work and plans have been completed for taking care of one of the largest meetings held in this City. Individual effort is needed and a kindly attitude when approached by a member of the Finance Committee will be of great assistance.

The Program for the Fourth Quarter is as follows:

Monday, October 6th, Board of Directors Meeting.

Monday, October 13th, Third Quarterly Meeting.

Monday, October 27th, Scientific Meeting.

Monday, November 3rd, Board of Directors Meeting.

Monday, November 10th, Scientific Meeting. (Election of Delegates, La. State Medical Society.)

Monday, November 24th, Scientific Meeting. (Nomination of Officers for the ensuing year. Opening of the Southern Medical Association Convention.)

Monday, December 1st, Board of Directors Meeting.

Monday, December 8th, Scientific Meeting.

Saturday, December 13th, Election of Officers.

Monday, December 22nd, Scientific Meeting.

Kindly notify this office immediately of any changes in address. Members failing to receive Journals, Meeting Notices, etc., are requested to advise this office.

Monthly bulletin of the Shreveport Medical Society, September, 1924. September meeting of the Shreveport Medical Society, September 2, at Charity Hospital at 8 P. M.

September Scientific Program.

Ocular Headaches, by Dr. R. C. Young.  
Nasal and Sinus Headaches, by Dr. L. W. Gorton.

Aural Headaches, by Dr. I. Henry Smith.  
October Scientific Program.  
Neuropsychiatry, in charge of Dr. J. D. Young.  
November Scientific Program.

Reconstruction of Ankylosed Joints.  
Illustrated with motion pictures. Dr. W. C. Campbell, Memphis, Tenn.

To open discussion Drs. Guy A. Caldwell and H. A. Durham.

December Program.

Election of officers. No scientific Program.

Charity Hospital, July 1st, 1924.

Shreveport Medical Society was called to order at 8:15 p. m. by President Butler. Minutes of last meeting were read and approved. Thirty-seven members were present.

Scientific Program.

This part of the program was presented by the Tri-State Clinic. The following papers were presented:

Caesarian Section, by Dr. T. E. Williams.

The Female Pelvis from a Urological Standpoint, by Dr. E. W. Harris.

Extra-Pelvic Symptoms due to Pelvic Pathology, by Dr. H. L. Green.

Toxemias of Pregnancy, by Dr. W. B. Heidorn.

Ectopic Gestation, by Dr. S. W. Boyce.

Surgery of the Tubes and Ovaries, by Dr. L. H. Pirkle.

Discussion by Drs. Caldwell, Herold, Rougon, J. D. Young, Johns, Williams and Harris. Clinical case by Dr. Harris.

Written communications.

A letter from Orleans Parish Medical Society was read.

A motion was made, seconded, and passed, authorizing the secretary to have the revised Constitution and By-Laws printed and enough copies of the A. M. A. Code of Ethics procured to distribute to each member.

On motion the Society adjourned.

A social meeting of the Shreveport Medical Society was held on the Youree Hotel roof, August 13th, starting at 9 p. m. The food was good. The music by the Louisiana Ramblers was fine. A goodly number joined in the dancing and apparently everybody had an enjoyable evening. One of the main features of the evening was the absence of speech making. President Butler, early in the evening, made this brief announcement, which seemed to meet with everyone's approval. This was probably the largest gathering we have had for years. One hundred and nine members and guests were present.

## THE DUCRO BILL RESOLUTIONS

At a regular meeting of the Physicians' Improvement and Protective Association, of La Salle Parish, held at Good Pine, La., August 7th, 1924, the following resolutions were unanimously adopted:

"Be it resolved by this Association, that we are opposed to the Ducro Bill as passed by the last session of the Louisiana Legislature, and

"Be it further resolved, that we advise our



members individually and collectively to refuse certificates of freedom from sexual or social diseases as a matrimonial expedient."

Dr. R. B. Wallace, of Alexandria, offered the following resolution:

"Be it resolved that the above resolution be published in the New Orleans Medical and Surgical Journal."

O. F. MATHEWS, M. D., President.  
W. V. TAYLOR, M. D., Secretary.

#### LAFOURCHE VALLEY MEDICAL SOCIETY

The Lafourche Valley Medical Society held a meeting in Thibodaux on August 13th, at 6 p. m. Dr. T. I. St. Martin, the president, presided, and there was some twenty members present. Dr. H. P. St. Martin read a very interesting paper on "Errors in Diagnosis," which attracted unusual discussion.

The Society was honored by the attendance of the President of the Louisiana State Medical Society, Dr. C. V. Unsworth, who was accompanied by Drs. Seemann, W. H. Block, Silverman, Clark, Johnson and P. T. Talbot, Secretary-Treasurer of the Louisiana State Medical Society, all of New Orleans. After the scientific program a sumptuous spread was given at the hotel by the members of the Lafourche Valley Medical Society to the visiting guests. The Lafourche Valley Medical Society unanimously voted their confidence and endorsement of the new Anti-Tuberculosis League recently organized under the auspices of the Louisiana State Medical Society.

(Note)—The above meeting was an unusual reflection of the medical activities in this vicinity, and is a credit to the Lafourche Valley Medical Society. The attending doctors trust that they may have the opportunity of enjoying another meeting with the physicians of the Lafourche Valley Medical Society.

#### WASHINGTON PARISH MEDICAL SOCIETY

A monthly meeting was held August 28th, at 8 p. m., at the Pine Tree Inn, Bogalusa, La. A supper followed the regular session, the program being limited to the paper of the visiting guest, Dr. E. Denegre Martin, subject, "Facts and Failures in the Treatment of Fractures." This meeting was well attended.

The semi-annual examination of the Louisiana Nurses Board of Examiners was held in New Orleans and Shreveport, June 16th and 17th. Sixty-seven applicants qualified as registered nurses. The successful applicants are:

Misses Grady G. Acker, Georgia M. Adkinson, Mary B. Alexander, Beatrice L. Aspiron, Era Atwood, Juanita M. Aycock, Mrs. Renee S. Bear, Misses Claire E. Bergeron, Camille K. Berthelot, Beatrice H. Billingsley, Ida M. Burkett, Ruth A. Burney, Pearle E. Burr, Lucinda E. Calhoun, Frances R. Claiborne, Leona G. Cooper, Mrs. Bessie L. K. Core, Misses Dorothy Crews, Flossie G. Dugas, Lelia M. Durand, Ethel B. Eves, Mrs. Lucile R. Elliott, Misses Lena Fitzgerald, Leicester B. Fuller, Lucille N. Fuller, Marguerite Furstenberg, Katherine Gallagher, Anaise J. Gianelloni, Erna M. Hanges, Blanche A. Harpster, Mabel G. Hasling, Mary L. Hester, Emily M. Hilbert, Willie M. Holzknicht, Marjorie Hubert, Mrs. Blanche D. Hudgins, Misses Ruth H. Hughes, Bertie Hutcherson, Vivian Johnson, Mrs. Effie M. Krumholt, Misses Stella M. LeBlanc, Minnie

Loflin, Marguerite S. McCann, Mrs. Lillian Meza, Mrs. Rebecca Monrean, Miss Pauline Delos Newby, Mrs. Sadie L. H. Ory, Miss Octavia M. Prejean, Mrs. Eula M. Moore, Mrs. Margaret M. Naughton, Misses Maude T. Sadler, Hilda S. Shushan, Annie T. Siekfort, Bessie M. Smith, Opal Smith, Mary J. Taillon, Louise M. Theriot, Beatrice Waldrum, Kathleen Wallace, Millie J. Watts, Marjorie R. Poche, Sallie Royal, Sister Mary L. Follant.

Colored applicants: Alice V. Bachemin, Zula A. Douglas, Bettie Beatrice Flowers, and Abbie L. Suel.

The Louisiana Nurses Board of Examiners is composed of the following members: Dr. John T. Crebbin, president; Miss Julie C. Tebo, R. N., secretary-treasurer; Dr. George S. Brown, New Orleans; Dr. Fred J. Frater, Shreveport; Dr. Robert W. Faulk, Monroe.

Dr. B. F. Gallant, of New Orleans, has opened a modern, up-to-date Neurological Hospital at Pass Christian, Miss. Dr. Gallant formerly served as Resident Superintendent of Charity Hospital of New Orleans. After severing his connection with the Charity Hospital he acted almost continuously as Medical Director of the Belvedere Private Sanitarium, which hospital was taken over by the United States Government in 1918. He then became Director of St. Luke's Private Sanitarium, which was sold to Mrs. M. L. Soniat, who gave it as a gift to the Sisters of Mercy. This hospital is ideally located and fully equipped to meet its purposes and requirements.

#### MONTHLY MEETINGS IN NEW ORLEANS

The Medical Staff meeting of Charity Hospital are held on the third Tuesday of each month, and the Surgical Staff meetings are held on the third Wednesday of each month in the Reception Room at 8 p. m.

The Eye, Ear, Nose and Throat Hospital meetings are held on the first Monday of each month in the Library at 8 p. m.

The Eye, Ear, Nose and Throat Club meetings are held on the third Thursday of every month in the office of the Orleans Parish Medical Society at 8 p. m.

Hotel Dieu meetings are held on the third Monday of each month in the Nurses' Class Room at 8 p. m.

Mercy Hospital meetings are held on the third Friday of each month at 8 p. m.

Presbyterian Hospital meetings are held on the last Thursday of each month at 8 p. m. in the Out Clinic Building.

Touro Infirmary meetings are held on the third Wednesday of each month at 8 p. m. in the Staff Assembly Room.

In some districts of the Belgian Congo there are more deaths than births, and in some places in this territory one-half of the children die before they reach the age of two. Reports indicating conditions such as these have led the National Children's Bureau of Belgium to appropriate, for the first time, 50,000 francs for a campaign against infant mortality in the Congo.

Defective eyesight in the public schools is costing the taxpayers of the nation at least \$130,000,000 annually, it is asserted by the Eye Sight Conservation Council of America, which, in a

statement sent to directors of summer schools throughout the country, urges organized conservation of vision as a social and economic need.

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#### CHILDREN'S BUREAU OF THE UNITED STATES DEPARTMENT

One-third of the homeless children in the United States under the care of public and private charitable agencies have found foster parents who have taken them into their own homes.

The revolutionary Abrams technique for the diagnosis and treatment of disease which has swept the country is utterly without foundation in science.

Such is the verdict of the Scientific American Abrams Investigation Committee which for nearly a year has subjected the so-called electronic reactions of Abrams to a searching analysis. The practitioners of the Abrams method have declared it holds out a new hope for suffering humanity. Its enemies have dubbed it the greatest piece of Charlatanism in history. The movement has spread to all parts of the world and threatened to upset the entire theory of the medical profession.

Alumni of The University Medical College, Kansas City, Mo., will hold a reunion banquet, Wednesday, October 15, 1924, 6:30 p. m., in the Banquet Room of the Kansas City Athletic Club, 11th and Baltimore, Kansas City, Mo.

During the noon hour of the same day the various classes from 1882 to 1913 inclusive will hold individual class reunion luncheons.

The reunion banquet is a part of the program of the Kansas City Clinical Society, which will convene in Convention Hall, Kansas City, Mo., October 13-18, 1924.

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#### A NEW CHAIR AT JEFFERSON MEDICAL COLLEGE

In recognition of the far-reaching developments of bronchoscopy in the diagnosis and treatment of diseases of the lungs and of esophagoscopy and gastroscopy in the diagnosis and treatment of diseases of the esophagus and stomach, the Board of Trustees and Faculty of The Jefferson Medical College has created a new chair to be known as the Department of Bronchoscopy and Esophagoscopy. Dr. Chevalier Jackson, formerly Professor of Laryngology in The Jefferson, has been elected to the professorship of the new department. Dr. Fielding O. Lewis has been elected to fill the Chair of Laryngology vacated by Dr. Jackson.

The Chicago Eye, Ear, Nose and Throat College is offering a two-year systematic graded course in eye, ear, nose and throat beginning October 1, 1924.

This is the first post-graduate school that has attempted a course as long as this and as complete.

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#### PERSONALS

Dr. Chas. E. Catchings, Woodville, Miss., is attending the Mayo Clinic.

Dr. T. C. Hughes, Clarksdale, has returned from Memphis, after being operated upon.

Dr. E. LeRoy Wilkins, Clarksdale, has returned from a two week's round of the Eye, Ear, Nose and Throat Clinics of Chicago. He also spent a while at the Mayo Clinic.

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#### REMOVALS

Dr. Walter J. Otis, Neuro-Psychiatry, from 3601 Prytania street, to Chaille Building, Tulane avenue, opposite Hotel Dieu.

Dr. A. L. Levin, from 1222 Maison Blanche Building, to 419-423 Chaille Building, 2000 Tulane avenue.

The Louisiana Railway Surgeons' Association met in Alexandria on Saturday, September 13th. Dr. Hermann B. Gessner, president, was in the chair. Dr. Bruce Wallace acted as secretary. There were present in addition: Drs. R. R. Arce-neaux, E. W. Breazeals, S. J. Couvillon, R. J. Ducote, E. R. Gandy, F. W. Parham, R. M. Penick, J. I. Peters, J. A. White, and John Wilson.

There was an interesting discussion on the management of wrecks. Steps were taken looking to the fitting out of hospital cars to be kept ready at the more important railroad centers. Dr. R. M. Penick gave the Association an account of his work as Chief Surgeon of the Louisiana Railway and Navigation Company, dwelling principally on the control of malaria and on keeping record cards of all patients admitted for hospital care.

An address by Claim Agent Vuncannon, of the Southern Railway Company, was read in his absence. The importance of not underestimating the seriousness of injuries was stressed, as well as the value of courtesy in dealing with claimants. It was decided to hold the next meeting in connection with that of the Louisiana State Medical Society.

The following officers were elected:

President, Dr. Hermann B. Gessner; first vice-president, Dr. J. A. White; second vice-president, Dr. R. M. Penick; secretary and treasurer, Dr. Bruce Wallace.

On September 25th, 1924, the Washington Parish Medical Society held its regular monthly meeting at the Elizabeth Sullivan Memorial Hospital, Bogalusa, La., as guests of the hospital.

The session was from 8 to 11 p. m. The program for the meeting was as follows:

Merourial Chrome (220), In Acute Infectious Disease, by Dr. J. H. Slaughter, Bogalusa. Discussion opened by Dr. Sanders.

Tuberculosis, Its Early Diagnosis and Prevention, by Dr. J. E. Pierce, Bogalusa. Discussion opened by Dr. Smith.

The Fifth District Medical Society met in Lake Charles on September 25th, 1924. Dr. C. V. Unsworth, president of the Louisiana State Medical Society, and Dr. W. H. Seemann, president of the Anti-Tuberculosis League, were present. Dr. H. B. Gessner and Dr. L. L. Cazenavette were on the program.

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#### INQUIRY

An Alumnus of Tulane, Class 1885, wants to arrange for a reunion of the entire membership of the class. It desires to get information as to the present address of Drs. H. C. or T. C. Chachere, D. L. Hicks, Pierce LeBlanc and G. C.

Ballard. In the event any of them have passed over the river, it is desired to know the cause, place and date of death, and present address of the nearest relative.

#### PUBLICATIONS RECEIVED

W. B. Saunders Company, Philadelphia and London: "Medical Gynecology," by Samuel Wyllis Bandler, M. D. "The Principles and Practice of Obstetrics," by Joseph B. DeLee, A. M., M. D.

Washington Government Printing Office: "Public Health Reports, Vol. 39, No. 23." "Year-book 1923, January, 1924."

Miscellaneous: "The Theory of Decrementless Conduction in Narcotised Region of Nerve," by Genichi Kato, Hongo, Tokyo, Japan.

#### REPRINTS

"Disease In Its Dormant State Activated by Trauma or Occupational Conditions," by Raphael Lewy, M. D. "A Study of the Interaction of Host and Parasite; A Reaction Product In Infections With Trypanosoma Lewisii Which Inhibits the Reproduction of the Trypanosomes," by W. H. Taliaferro. "The Inheritance of Sicle-Cell Anaemia in Man," by W. H. Taliaferro and J. G. Huck. "A Note On the Human Intestinal Amoeba, Dientamoeba Fragilis," by W. H. Taliaferro and Elery R. Becker. "The Cultivation of An Endamoeba From the Turtle, Chelydra Serpentina," by Harvey P. Barrett and Nannie M. Smith. "Endamoeba Barreti, N. Sp., From the Turtle, Chelydra Serpentina; A Description of the Amoeba From the Vertebrate Host and From Barret and Smith's Cultures," by W. H. Taliaferro and F. O. Holmes. "A Reaction Product In Infections With Trypano Soma Lewisii Which Inhibits the Reproduction of the Trypanosomes," by William H. Taliaferro, Ph. D.

#### BOOK REVIEWS

Geriatrics: A Treatise on the Prevention and Treatment of Diseases of Old Age and the Care of the Aged, by Malford W. Thewlis, M. D., with an introduction by A. Jacobi, M. D., LL.D., and I. N. Nascher, M. D. Second Edition, revised and enlarged. 8° pp. 401. St. Louis, Mo. C. V. Mosby & Co. (1924).

The "Journal" is pleased to note the appearance of a second edition of Dr. Thewlis' well known treatise on Geriatrics (from the Greek *Geras*—old age) and to congratulate the author on the success which has attended his persevering efforts to direct the attention of the profession of this country to the importance of this neglected phase of medical practice. To those who have been following Dr. Thewlis in his valuable contributions to the literature of senility as they have appeared in the last five years in the *Medical Review of Reviews*, and other publications, it will be agreeable to find them assembled in an accessible form in this second edition. The book as it now stands exhibits an admirable survey of the anatomical, physiological, pathological, therapeutic, hygienic and sociological relations of old age to the other seasons of human existence. The facts assembled in this volume are sufficient to justify the claims for Geriatrics or Geriology, as a special field of medical inquiry and study, second only to pediatrics in importance,—the other periods, of puberty, adolescence and maturity or adult life, constituting the bulk of the material upon which general medical practice is

based. In comparison with the rapid and phenomenal strides with which pediatrics as a legitimate specialty, has developed in this country, the scant attention and indifference shown by the majority of practitioners to the important problems of old age, is curious if not surprising. That this neglect is not deserved and is indeed a serious error, will be quickly realized by anyone who will merely glance at the titles to the 43 chapters of this most interesting volume. The bibliography of Geriatrics, embracing, as it does, over 200 references to every phase of the subject, will also suffice to prove that the philosophical, sociological and medical relations of senescence and senility have engaged some of the most thoughtful minds of all the ages. That the prevailing pessimism in dealing with the infirmities and diseases of the aged is not justified by a proper concept and knowledge of modern hygiene and therapy, is well shown in this book. In the language of Nascher, to whom the book is very appropriately dedicated (as he was the first systematic author on this subject in America, 1914). "Senility is a physiologic entity, like childhood; not a pathologic state of maturity." "Diseases in senility are pathologic conditions in a normally degenerating body; not diseases such as occur in maturity, complicated by degenerations." "The object of treatment of disease in senility is to restore the diseased organs and tissues to the state normal in senility; not to the state normal in maturity or in the prime of life."

Furthermore as properly understood by the author, Geriatrics includes not only the treatment of senile diseases, but also the care of the aged, the causes of ageing and the measures for staying the progress of the physiological decline, and thus prolonging often most valuable lives.

Many of the arterio-sclerotic and other senile changes begin about the age of 45 (and often long before this) and proper attention at this time would prevent their too rapid development. The study of Geriatrics should then include persons of about fifty (age when the senile changes usually or normally first become manifest).

In going over the bibliography we note a number of minor errors in the orthography of proper names and also regret to see that the magnificent volume on "Senescence" (1922) which crowned the brilliant literary and philosophical career of G. Stanley Hall, is not included in the list.

RUDOLPH MATAS.

1—Cancer de L'Intestin, par J. Okinczyc, Professeur agrégé à la Faculté, etc. 1 Vol. 8° 240 pp. with 78 illustrations in the text. Paris, G. Doin, publisher, 8, Place de l'Odéon. Price, prepaid Fes. 16.50.

2—Cancers du Rein, de la Glande Surrénale et des Voies Urinaires Supérieures, par P. Lecène, professeur à la Faculté, etc., et G. Wolfrohm, Préparateur à la Faculté de Médecine, Paris; 1 Vol. 8°, 212 pp., 32 illustrations in text. (Same publisher and price as above.)

These admirable monographs are the first two issues of the new "Bibliothèque de Cancer" or Library of Cancer, which is being published by Gaston Doin, the well known medical publisher of Paris, under the editorship of Professeurs H. Hartman (Paris) and L. Bernard (Lyons). It is the purpose of the editors to cover the whole regional distribution of cancer in the various organs of the body by a series of individual monographs in which the manifestations of can-

cer in the organs involved will be considered and thoroughly discussed by the most competent French specialists. It is a large and ambitious undertaking, but the editors selected for the task could not have been better chosen. Their excellent judgment in their selection of their collaborators, is well displayed in the thoroughness and superior quality of these first volumes. Other volumes on Cancer of the Thyroid, by Bérnard and Dunet of Lyons, and on Cancer of the Rectum by Chalié (Lyons) and Mondor (Paris), are in press and others are announced, showing that the enterprise is well in hand, and will ultimately be completed in a way that will reflect the greatest credit upon the progressive spirit, the energy and alertness with which the surgical and medical problems of cancer are now being investigated in France.

1—Okinczyc's work, in the volume on intestinal cancer, confirms his unusual surgical experience and knowledge of the subject, and all that his previous contributions to the study of intestinal cancer (especially his report to the French Surgical Congress in 1922) would lead us to expect. This volume will appeal to all internists, gastroenterologists and surgeons who are brought face to face with the difficulties in diagnosis and treatment of cancer when localized in the digestive tract. As long as the only hope for the cure of intestinal cancer lies in the *early* and *complete* extirpation of the disease, the close collaboration of the internist with the surgeon must remain the most efficient agency that the profession can command in its struggle with the disease. Primary cancer of the intestine remains localized for a long time before it begins its deadly excursions, and, in this way, is most favorable for surgical attack, provided it is recognized *early* enough and before it has begun to disseminate. Hence the importance of an early diagnosis. It is this phase of the subject that us unusually well developed in Professor Okinczyc's book. Special stress is laid upon the symptomatology offered by the various segments of the bowel. This is supplemented by the modern methods of radiology and other laboratory aids to a definite localization. The pathological histology is, however, not neglected and the author is especially insistent upon all the differential peculiarities of the tumor tissue that throw light upon the prognosis. The professional surgeon will, however, benefit most by the thoroughness by which the various operative methods indicated for the extirpation of the disease, in the several bowel segments, are discussed. The technic is illustrated by a great profusion of drawings and diagrams and the statistical comparison of the results obtained by these different procedures is lucidly presented from every angle and from every available source. In this way, the surgeon who is weighing the evidence before deciding upon the method of election in any given case will find here the most abundant and most recent information.

We know of no monograph in contemporary surgical literature that is more enlightening and

helpful in dealing with the grave and arduous problems of intestinal cancer.

A bibliography of 287 references, embracing the latest world literature on the subject, closes the volume and attests to the thoroughness with which the author has surveyed the field covered by his research.

2—In the volume on cancer of the kidney, suprarenals and adnexa, Drs. Lecéne and Wolfromm have accomplished the difficult task of compressing in a single volume of 277 pages all the essential and important facts that interest genito-urinary specialists and the student of the malignant neoplastic diseases of the kidney, in all their relations. They classify the primary cancers of the kidney into the sarcomata and the epitheliomata. The epitheliomata are subdivided into (a) Nephro-epitheliomata or tumors derived from the epithelium of the tubular structure. These are again subdivided into types: the tubular, and the papillary or cysto-papillomatous tumors. (b) Tumors derived from aberrant islands (ectopic) of cortico-suprarenal origin: Hypernephromas. (c) Mixed tumors which are again subdivided into simple mixed tumors, and Teratomata. In addition to the primary tumors of the renal parenchyma, there are chapters on the malignant tumors of the suprarenal bodies, the pelvis and ureter, and a final chapter on the solid paranephric tumors of the proper renal and of the cellulo-adipose capsule, which are so closely related clinically and pathologically to the neoplasms of the kidney itself.

To those who are acquainted with Professor Lecéne's special competence as a pathologist and histologist, as well as surgeon of large experience and recognized authority,—it is not surprising that the discussion of the complex and difficult problems offered by the histopathogeny of renal neoplasms, should be treated with a lucidity and acumen that is rarely found combined in purely pathological or surgical treatises.

Every page of this work reveals the expert pathologist at work with a mind and judgment well adjusted to the facts of clinical observation and surgical experience. In this alone, this monograph appeals not only to the specialist in genito-urinary diseases, but to the general surgeon who desires to become familiar with the modern status of a number of difficult questions which he could not unravel without expert guidance. While clarifying the histopathology of malignant growths of the kidney, their early diagnosis, by radiology, ureteral catheterization, blood chemistry and all the laboratory aids that assist the modern urologist in arriving at practical conclusions, is not neglected.

The operative technic is well illustrated and is thoroughly up to date. The bibliography at the end of the volume gives 138 references to the latest literature and is alone worth the price of the book.

It is hoped that these two excellent volumes will be soon translated for the benefit of English-speaking readers who are not familiar with French. RUDOLPH MATAS.

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\$2.00 per Annum, 25c per Copy  
Volume 77, Number 5

NOVEMBER, 1924

Published Monthly in New Orleans  
at 1551 Canal Street

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Next Annual Meeting Louisiana State Medical Society, New Orleans, April 21-23, 1925  
Next Annual Meeting Mississippi State Medical Association, Biloxi, May 12-14, 1925  
Next Annual Meeting Southern Medical Association, New Orleans, Nov. 24-27, 1924

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# New Orleans Medical

and

# Surgical Journal

Vol. 77

NOVEMBER, 1924

No. 5

## RADIODERMATITIS AND ITS TREATMENT\*

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The reaction of the skin to various irritating substances, while of the same general character, may vary somewhat according to the nature of the irritant, and it is sometimes possible to determine the type of the irritating agent by the reaction itself. Thus, the characteristic effect of certain chemical substances, such as phenol, is well known. The specific features of such reaction depend on the strength of the substance employed. Pure acids and alkalis destroy the integument before it has time to oppose any defence, but if the acid or alkali is suitably diluted, any degree of irritation and of consequent reaction can be produced. The only factor involved, besides the nature and strength of the irritating agent, is the resistance of the tissues as affected by their condition.

Many substances, quite innocuous or indeed stimulating under ordinary conditions, may readily produce more or less irritation, and even destruction, if the conditions under which they act are altered. The rays of the sun are a striking example. Exposure to the solar rays under judiciously controlled conditions not only is free from injurious effect, but frequently produces astonishing stimulation of growth or repair. However, as painful experiences have taught many of us, careless exposure to the sun can produce very definite and incontrovertible tissue irritation and, in extreme cases, actual destruction.

The effect of X-rays and of radium rays on the skin resembles in many ways that

of the sun, but there are also certain outstanding points of difference. In both cases exposure beyond certain limits will cause the appearance of more or less pronounced evidences of irritation, from erythema to vesiculation, and finally to necrosis; in both, these evidences are confined to the surface directly exposed, and in both the appearance of the surface in corresponding degrees of irritation bears many points of resemblance. Besides the degree of exposure required to produce irritation, such reaction depends in both cases on the complexion of the individual (degree of natural pigmentation), the part of the body (thickness of the skin or number of cell layers), and the metabolic state of the skin as affected by circulatory and nervous activity.

However, solar dermatitis and radiodermatitis differ much in reaction time. In the former, reaction follows action within a few hours; in the latter, reaction seldom appears before from five to twenty days (generally seven to fourteen). While a relatively thin layer of any material substance will provide adequate protection against the solar rays, such protection in the case of X-rays and radium rays requires a sufficient layer of material of high atomic weight, such as lead foil or sheet lead.

With the increased use of X-rays, both for diagnostic and therapeutic purposes, it is but natural that radiodermatitis should be more common. While improvements in technic and more accurate methods of measuring dosage have made it easier for the experienced radiologist to avoid extreme degrees of cutaneous irritation or destruction, instances of accidental "burns" continue to occur. In diagnostic radiology, such accidents usually happen in the hands of the inexperienced. In treatment, radiodermatitis is not so commonly "accidental." In treating many lesions, particularly the resistant types of malignancy, it is often

\*Read before the Louisiana State Medical Society, Opelousas, April 22-24, 1924.



Fig. 1.—Area of radiodermatitis, right lower quadrant of abdomen, December 7, 1923 (photograph from original colored drawing). Entire area depressed from 5 to 8 mm. below the surrounding surface, and covered with dirty gray or greenish-gray necrotic papier mache coating. Margins of area distinctly thickened and of dusky red hue. Considerable seropurulent discharge. Intense pain for months.

necessary to give the maximal dose permissible, and, since the skin varies somewhat in sensitiveness, there is more or less marked local reaction in certain cases. There is also the possibility of technical errors, such as the incorrect measurement of distance, the omission of filters, with a technique requiring filtration, and inaccurate timing. Indeed, when severe forms of radiodermatitis are encountered, they are nearly always the result of such errors.

The determination of X-ray dosage (or exposure time in radioscopy and radiography) is based on the following factors: effective voltage at the tube terminals; distance from the tube focal spot to the skin; intensity (milliamperes) of the current passing through the tube; quality or effective wave-length (degree of filtration) and time of exposure. An error in any of those factors may lead to more or less serious complications. At a given voltage, intensity (m. a.) and focal skin distance, the quality and degree of filtration may greatly alter the latitude of exposure.

#### *Reaction of the Skin*

Radiodermatitis may be acute or chronic, and like dermatitis caused by any other agency, may vary from a faint erythematous blush ending in pigmentation to violent inflammation with edema, and termi-

nating in ulceration. While all stages of reaction may be encountered, it is convenient to consider acute radiodermatitis as occurring in three degrees.

*First Degree.*—This includes the milder forms of reaction phenomena, characterized by erythema, a sensation of heat and depilation. It appears, generally from ten to twenty days following exposure, as a diffuse blush. The patient complains of a hot burning sensation. If the surface involved is relatively flat, and if the field exposed is confined to a geometric figure bounded by protective material opaque to the rays, the zone of reaction will be sharply outlined. However, such delineation will be more or less obscured or absent if the area exposed is concave or convex, or if no opaque material is used to limit the action of the rays. After three or four days the symptoms begin to subside and the erythema gradually gives way to a brownish or "tan" pigmentation. With this reaction may be included a slightly more severe grade in which all the symptoms are slightly accentuated and which ends in desquamation. Repeated doses to the point of first degree dermatitis, instead of increasing the tolerance of the skin, seem to render it somewhat more sensitive.

*Second Degree.*—Here the irritation has been greater and the consequent reaction is more intense. The erythema appears a little earlier, is distinctly more pronounced, sometimes assuming a livid hue, and is followed by a stage of exfoliation lasting from one to three weeks. Slightly stronger dosage causes the vesicular phenomena to be more accentuated, and to be accompanied by exudation and an intense burning or "raw" sensation. This becomes particularly marked when the vesicles begin to break and their epidermal covering to separate. For several days the resulting raw surface is bright red and covered with exuding serum. This gradually dries until a fresh epidermic layer has formed. The clinical picture may become complicated by mild infection. Before, or simultaneously with, the vesiculation, the primary erythema gradually shades off into a more or less marked epidermal bronzing. The symptoms, of course, are more pronounced and more distressing. Irritation to this degree leads to atrophy and, after from one to three years, to telangiectasis. If repeated several times at relatively short intervals (one to two months), it may, in a few cases, lead first to subcutaneous edema, and later to a dense brawny induration. However,

this does not take place until months afterward and, according to our observations, only in obese persons. We have seen this end result in two cases; in both, slight trauma caused sluggish ulceration which healed spontaneously.

The experiments of Martin have shown that increased heat and moisture, such as occurs between surfaces habitually or frequently in apposition (axilla, groin, perineum and fatty folds in obese persons), have a distinct tendency to render the skin over such regions more radiosensitive. The topical use of certain chemical substances also has been shown to increase the sensitiveness of the skin. Among these may be mentioned: iodine, scarlet R, mercury, pyrogallol, cantharides, resorcin, betanaphthol, tar, iodoform, sulphur and salicylic acid. These substances are most potent in the form of ointments. While the importance of such knowledge is greatest in X-ray treatment of diseases of the skin, it is also of capital significance in any application of radiotherapy; it may frequently help to explain the occurrence of reactions which, otherwise, would be insoluble mysteries. It is on such factors as this and on unrecorded errors in technic that most of the reported instances of so-called idiosyncrasy are based.

*Third Degree.*—To produce such extreme effects the exposure must be grossly overdone. They are practically always the effect of gross errors in dosage estimation or administration. The result may be especially tragic if more than one dosage factor is involved. In such cases evidence of extreme irritation may appear within two or three days, and, after passing through short stages of intense erythema, and vesiculation, proceed to the point of ulceration. Such ulceration may be slight, moderate or severe; it may involve only the skin or may extend into the underlying tissues. This destructive process has several distinguishing features; it is limited, either wholly or on one or more of its sides, by a relatively sharp outline corresponding to the area exposed; its surface is covered by a greyish or greenish grey necrotic layer, with seropurulent exudate; the ulcerated surface gives rise to excruciating pain lasting for months or years, and the natural tendency to repair is held in abeyance. The acute phenomena gradually subside and the lesion passes into a chronic state characterized by pain, a dirty grey or greenish grey, papier mâché coating and little or no tendency to repair. The margins are irregularly thick-



Fig. 2.—Partial epithelization, December 17, 1923, and remaining central portion covered with granulations.

ened, extremely tender, and of a dusky red hue, indicating dense roundcell infiltration. In relatively mild forms of third degree reaction, the ulcerated surface may heal rapidly, but later, under the provocation of even slight trauma, may again break down and remain indefinitely in a state of chronic ulceration. In other cases the involved area may remain intact for a long period without breaking down, but, if traumatized, small ulcers develop and gradually extend to the margins of the field. The patients suffer intense pain, sleep is seriously interfered with, and their general condition deteriorates. The severe and continued suffering frequently leads to the acquisition of the narcotic habit and, in some instances, suicidal tendencies develop.

It is an interesting fact that tissue injury to this extent is more common in radiocopy and radiography than in radiotherapy, and is usually the consequence of excessive zeal, lack of experience, or both. The roentgenologist, interested in some unusual finding, anxious to make a diagnosis in a difficult case, or wishing to observe the behavior of certain physiologic or pathologic phenomena, may lose sight of the total exposure, particularly if, after the roentgenoscopic examination, the same region is further exposed for serial roentgenograms. In such cases it is usually the skin of the back, which, being nearest to the tube, bears the brunt of the insult.

#### *Chronic Radiodermatitis*

Chronic radiodermatitis, according to the mode of its production, may be of three

types: it may follow the acute phases of a third degree reaction as the result of a single grossly exaggerated exposure; it may appear as the late sequel of a moderately acute radiodermatitis followed by repeated exposure for a prolonged period. In some cases repeated exposure for many years, even in the absence of a primary acute dermatitis, may finally lead to chronic changes. The two last types are usually encountered in mature radiologists. It commonly involves the dorsum of the left hand, because, in the early days, many pioneers not realizing the danger, and not having the advantage of our present knowledge and methods of protection, acquired the habit of testing the quality of their X-ray tubes by interposing the left hand between the tube and the fluorescent screen. This form of radiodermatitis is characterized by dryness, thickening and a tendency to crack. Such a skin is easily irritated, especially by small doses of X-rays, and keratotic changes, frequently ending in epithelioma, are prone to develop.

Certain skin diseases having no relation whatever to X-rays are occasionally confounded with radiodermatitis. However, even without special experience, it is generally possible to distinguish the effects of the X-ray from the lesions of herpes zoster, for instance; the history of a relatively recent course of X-ray treatment, the ordinarily sharp outline (at least in part) of the zone involved, and the distribution, should serve to clear up the problem,

#### *Prophylaxis*

Since the cause of radiodermatitis is obvious, and since the factors involved in its production are measurable within relatively accurate limits, its occurrence is quite preventable. However; the human mind is proverbially prone to error and it is doubtful if this factor can ever be wholly removed. Nevertheless, it is readily possible to minimize it considerably. In radioscopy and radiography it is a simple matter to calculate the total permissible exposure under given working conditions, and the radiologist must train himself to keep within safe limits. In radiotherapy careful estimation of the dosage factors and one or more checks on these factors during the actual administration of the treatment will effectually prevent all but the mildest forms of radiodermatitis. There is no excuse for third degree reactions. Physicians lacking in experience must be particularly careful to bear the dreadful possibilities in mind and keep within safe limits. If they do not



Fig. 3.—Same area after twenty-one days' treatment, showing most of the surface covered with fresh, healthy epithelium, and progressing rapidly.

know what constitute safe limits, they have no right to attempt to use X-rays for diagnosis or for treatment. The uncontrolled employment of this agency by persons outside of the profession is both incongruous and unpardonable, and should not be tolerated.

In the practice of radiotherapy it is often essential, especially in dealing with malignant processes, to deliver a dose bordering more or less closely on the limit of skin tolerance. If this is to be done, the reasons and the symptoms to be expected should be explained to the patient beforehand; otherwise, when symptoms of skin irritation do arise, he may attempt to counteract them by injudicious means. As previously mentioned certain chemical substances have a tendency to accentuate the phenomena of irritation, and should not be used on a field recently exposed.

#### *Treatment*

Radiodermatitis of the first degree hardly requires treatment. However, the sensation of heat may be sufficiently distressing to require a soothing topical application such as Dodd's lotion. As the acute phase subsides, itching may become more or less annoying and may be controlled to a considerable extent by continuing the use of the lotion for a week or ten days. Such remedies as borozin, zinc stearate, calamin lotion, aluminum acetate in 7 per cent stock solution and diluted 1:16 may also be used to advantage. In the second degree reaction the same measures are useful, but, if

the reaction should border on the third degree, less the ulceration, ambrine or paraffin dressings may be very useful.

During the acute stage third degree, the dermatitis should be treated in much the same way as in the first and second degrees. However, after it has reached the chronic stage the method of procedure depends on the site of the lesion and the character of the adjacent tissues. When it is possible to excise the whole area, and to bring healthy tissues into approximation, primary union and speedy convalescence can be assured. However, prior to undertaking such excision an attempt should be made to prepare the surface by cleansing it of necrotic material and bacterial products, and endeavoring to reduce marginal inflammatory phenomena. Primary union may be obtained, provided a sliding flap can be shifted into the excised area, and there is sufficient blood supply in the flap for nourishment. Areas too large for excision and primary approximation can be excised, provided the underlying tissues have an abundant blood supply that will enable them to granulate. Grafts may then be planted and the wound allowed to heal, as in an ordinary skin graft wound. It is a mistake to attempt a skin graft on a poorly nourished surface, because the graft usually dies, or superficial infection develops and destroys the epithelium; nor should an approximation be attempted when the excised area is down on fascial surfaces, and tension is necessary to secure approximation, because the sutures become infected and sloughing occurs, thus prolonging convalescence.

In cases in which primary excision and closure, either by direct approximation or sliding flap, cannot be accomplished, the area may still be excised if circumstances permit, because the edematous tissue and necrotic layer are extremely annoying and painful, whereas a newly made wound, the result of excision, is preferable to attempting the treatment of an old burn. How-

ever, it is sometimes impossible to do other than treat the injured area as it is found when the patient presents himself for treatment.

For the last two years we have used what has seemed to be a very satisfactory method, considering the length of time X-ray ulcerations require to heal. Time must be calculated in months rather than in days or weeks. The method consists in the use of hyclorite solution diluted from 1:20 to 1:30 and applied to the surface of the wound either by Dakin tube method or by wet dressings frequently bathed with the solution. Hyclorite should be made up with cold water, because the chlorin it contains is liberated by heat and therefore lost. Usually the patient, if physically weak and depressed, should be hospitalized, and the Dakin tube used. This treatment should be continued until the surface of the wound is cleansed of slough and exudate, and granulation tissue has formed a clean surface for epithelial repair. This epithelization will form a new protective layer for the whole wound. Occasionally, over an area in which the blood supply is scanty, it may be necessary, after the epithelium has apparently ceased to grow, to attempt to complete the protective layer by grafting. Such cases often tax the ingenuity of the best surgeons.

Direct sunlight will always be found a useful adjunct, but must never be filtered through glass, which removes the actinic rays and deprives it of the very properties for which it is useful. It should be administered in progressive, graduated doses, beginning with a minimum of three minutes and working up by regular stages to one-half hour. If, for any reason, sunlight is not available, artificial light, such as the quartz lamp, is a useful substitute and should be employed in the same way. However, the wound should not be exposed to sunlight when hyclorite solution is being used, because dissociation of the solution takes place in the presence of the sunlight, liberating free chlorin, which combines with the water in the tissues to form hydrochloric acid.

Dressings with a paraffin base are beneficial when the granulations are clean; they serve to protect the surface from the air; they keep the wound moist and may be removed without discomfort to the patient. However, they should be changed every twenty-four hours. If, as frequently occurs, a film of whitish exudate forms on the surface of the wound it indicates the use of hyclorite.

\*Formula of Dodd's lotion :

Phenol .....	1.85 gm.
Zinc oxid .....	15.5 gm.
Glycerin .....	4.0 gm.
Limewater, qs. ad.....	250.0 gm.

After the bottle has been thoroughly shaken, the lotion is poured over a wad of absorbent cotton until the latter begins to drip. This sponge should then be gently dabbed over the inflamed surface, and the lotion allowed to dry. The application should be repeated so that the entire area will be thoroughly covered with the lotion. The second coat should likewise be allowed to dry before clothing is put on. This should be done night and morning for at least two weeks.

To illustrate the employment of these various agencies we will cite the following cases, the first being an example of non-surgical treatment, the second, of treatment after attempted partial closure and subsequent skin graft.

Mrs H. first registered at the Clinic December, 1922. Her complaint was of multiple sinuses of the abdominal wall following a laparotomy performed elsewhere some months previously for appendicitis, in the course of which a tumor was encountered. When the patient was examined at the Clinic, this was found to be part of an actinomycotic process. The sinuses were explored and later treated with radium and X-rays. By May 1, 1923, all but one sinus were healed and the patient was allowed to return home to continue X-ray treatment there.

She returned in November, 1923, with the history of having had two courses of X-ray treatment elsewhere, and on examination was found to have a third degree radiodermatitis approximately 20 by 12.5 cm. in size involving the right lower quadrant of the abdomen. The patient was mentally depressed from extreme suffering and had not slept two consecutive hours since the middle of July when the damaged area had broken down. She had been using narcotics to relieve pain and had lost 20 pounds. She was immediately hospitalized and given sedatives until we could get her under control. Nourishment was given freely, and continuous wet hyclorite irrigation by the Dakin tube method with a solution diluted 1:30 was instituted. Zinc oxide ointment was placed carefully along the edges of the wound to protect the painful margin, and paraffin mesh cut large enough to cover the injured surface was applied, the edges resting on the ointment, thus protecting the border of the wound from irritation. The treatment was continued from November 13 to December 22. During this time narcotics had been discontinued, and the sloughed, thickened area and dead skin had either been excised or dissolved by the hyclorite solution. The epithelial borders were closing in so that, by December 21, the patient left the hospital and came to the Clinic for dressings. The paraffin method was then instituted. Parresine was sprayed over the whole surface. One thickness of gauze was tamped into the paraffin layer, and the gauze sponge covered with one layer of parresine. The whole dressing was covered with a light layer of gauze, over which was placed an oval woven-wire splint, the edges of which were covered by ordinary rubber tubing, such as is used for drainage purposes, and sewed on, thus giving a pneumatic cushion effect. A belt was sewed to one edge, and a buckle to the other, in order to hold the dressing in position and to permit the patient to go about comfortably. Gauze moistened with hyclorite solution was applied to the surface of the wound every three or four days for a period of about two weeks, and the patient was instructed to keep the dressing wet with the solution which was supplied. This was used for the purpose of dissolving the fibrinous exudate which consists of tissue products, cellular detritus, and bacteria. If this exudate is excessive, it forms a film over the underlying granulations, and when in contact with the epithelium along the edges of the wound, produces local inflammatory changes and erosion of the epithelial cells. Hyclorite dissolves this exudate and reduces the growth of bacteria to a minimum; the best results can be obtained by alternating the

hyclorite treatment with parresine or ambrine dressings every two or three days.

This patient was dismissed recently with only 21.8 sq. cm. of granulation tissue remaining. We felt perfectly safe in allowing her to return home with this small unhealed area, to continue treatment under the supervision of her local physician. During her stay she had gained 22 pounds, and, so far as we could ascertain, was free from actinomycosis and in excellent health.

Case 2. Miss N. registered at the Clinic December 30, 1922. Five months previously she had undergone, elsewhere, repeated radiosopic examinations, supplemented by radiographs. One week later redness and vesicles developed on her back over an area 15 by 7.5 cm. In two weeks the entire skin sloughed away, and for the next few months she was treated with ointments, but without relief. Her wound became progressively more painful and irritated. She lost in weight and could not sleep. The area involved was located over the lower dorsal vertebrae. January 7, 1923, the injured area was excised and drawn in by tension sutures in the hope of narrowing the gap, and later a Thiersch graft was inserted. January 17, a skin graft the size of the palm of the hand was grafted to the remaining area, and by January 29 the grafts had taken.

When the patient was dismissed from the hospital there was a small thin epithelial patch in the middle of the wound; the edges were covered with pus and slough and there was no attempt at healing. February 9, hyclorite dressings in a dilution of from 1:20 to 1:30, according to the comfort of the patient were applied. This treatment was alternated with exposure to sunlight through an open window in graded doses, starting with a two-minute session and increasing to twenty minutes. When the wound was quite free from slough and exudate, paraffin was sprayed over it, as in the previous case, and alternate hyclorite and sunlight treatments were continued until May, when the size of the wound had reduced from approximately 125 sq. cm. to less than 6.25 sq. cm. The remaining portion of the wound was covered with epithelium. However, the patient remained in town for a month, fearing that the wound might again break down. When she left in June, it was still healed.

In the chronic radiodermatitis of radiologists the problem of treatment assumes a different aspect. Since it involves a high degree of irritability, some means of protecting the skin from the source of irritation must be provided and constantly used during periods of potential or actual exposure. If this is not sufficient to overcome the irritative phenomena, some reorganization of the radiologist's professional activities must be made. He must arrange his work so as to avoid any possible exposure, no matter how slight, and it will be safer to make such rearrangement permanent.

If the cutaneous manifestations have reached the point of localized hypertrophy and keratosis, the measures mentioned are still more imperative. Ultraviolet light treatment may be given a trial, but the lesions should receive the close scrutiny and regular observation of an able derma-

tologist, who should decide if, and when, a biopsy is necessary. Small keratotic patches may be destroyed by Oudin desiccation or, if advisable, by electro-coagulation or by radium.

Should the lesions actually be in a state of epitheliomatous proliferation, radical surgery should not be delayed. Sentiment is too often allowed to influence the treatment in such cases. Too frequently, the surgeon, anxious to save as many fingers as possible for his unfortunate colleague, limits his excision too much. In a few months, or perhaps in a year or more, recurrence appears and another finger or two, or a portion of the hand is amputated; too much precious time is thus wasted in half measures.

#### *Conclusions With Reference to Treatment*

1. The mode of treatment depends on the location of the burn, the looseness of adjoining tissues, the thickness of tissue, and the blood supply.

2. Hyclorite dressings are exceedingly beneficial in cleansing the wound, and seem to stimulate the epithelium. At least we do not believe that epithelial cells are deterred from proliferating by the dilutions used. Hyclorite is preferable to Dakin's solution, the chemical qualities of which are too inconstant.

3. Sunlight in conjunction with wet dressings is very beneficial.

4. Paraffin dressings permit the patient to get about, protect the wounds, and apparently epithelium grows luxuriantly under it, if the surface is free from bacterial products. However, the dressing should be changed every twenty-four hours.

5. When a film of whitish exudate appears, the use of the wet hyclorite dressings is indicated, and in the course of two or three days, the exudate will usually disappear. The use of paraffin dressings may then be resumed.

6. In the chronic radiodermatitis of radiologists, half-way measures are pernicious. Early radical measures are safer in the long run, and sentiment should not influence the decision as to treatment.

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#### DISCUSSION

Dr. S. C. Barrow (Shreveport): I feel we have all been very much benefited, and I feel particularly thankful to Dr. Desjardins for bringing before us such an important matter, and about which we know so little.

I can add nothing to what the doctor has said, but I might report a case which I have just succeeded in healing, a case which I burned in 1910. In those days that was excusable; today it is not. I burned this woman over the face in 1910, and I have tried everything imaginable since that time to heal the wound, but failed. Fortunately, I maintained the friendship of the family and have had a chance. Recently I subjected her to the intensive use of ultra violet radiation, producing a hyperemia in the edges of the sore and maintaining that hyperemia for eight weeks, giving a dose every day or every second day, and destroying the little islands of hyperepithelial formation with radium. This patient has now a smooth, nice patch of skin over the side of her face, which was bare the size of the palm of my hand.

I really got up to ask the physicians to remember this point. Today when we are treating deep malignancies and others we are forced to carry our treatment to the maximum, and frequently you will see a case with a flush over the abdomen and you say to the patient it is the result of an X-ray burn. Please discard the use of the word "burn," and help us by advising patient to return instead of telling them they have an X-ray burn, and we can possibly get them through, retain their friendship, and not have a lawsuit.

Dr. L. J. Menville (New Orleans): The Section on Roentgenology deems it a great honor to have as its guest the chief of the roentgen therapy department of the Mayo Clinic, where their experiences in therapy cases mount up to the thousands. For that reason the paper is of immense value.

I only have one word to offer, and that is this—the men today who are doing roentgen therapy and diagnostic work will realize that when burns result it is usually from the therapy end of their work. Frequent calibration of the milliammeter, and observing the variation in the line voltage, will alleviate many cases of dermatitis.

Dr. S. J. Couvillon (Moreauville): I would like to ascertain from the essayist whether pellagrins are more susceptible to X-ray burns than other classes of patients?

Dr. A. U. Desjardins (closing): In answer to the doctor's question about pellagra, we see this condition so seldom that we have never had to deal with such a case.

In psoriasis, radiotherapy has to be given with care, because in certain cases the skin is unusually sensitive and will react to doses which would produce no effect on a normal skin.

Dr. Barrow has brought out a point which cannot be made too strong. There is a tendency on the part of many physicians not to send the patient back to the radiologist when skin reaction occurs. Various topical applications are used without inquiring if this can be done safely. Occasionally cases have been encountered in which the local physician, without investigating the circumstance, has made a snap diagnosis of X-ray or radium burn when the lesion was quite different. I could cite cases, but do not wish to take the time now.

## SPASM OF THE ACCOMMODATION.\*

H. L. ARNOLD, M.D.  
MERIDIAN, MISS.

In spasm of the accommodation or tonic cramp of the ciliary muscle there is either

I. An excessive stimulation of the ciliary muscle, or

II. A hyperexcitability of the nervous system causing exaggerated reactions to normal stimulation, or

III. What is probably the condition in most cases, we have a combination of these two causes.

I. Excessive stimulation may be found

(a) In uncorrected ametropia, especially in hyperopia and astigmatism, and occasionally in myopia and early presbyopia.

(b) In exophoria where the extra convergence effort stimulates the accommodation through the accommodation-convergence center.

(c) In exposure to excessive or ill-placed illumination.

(d) In use of the eyes in a strained position, as reading in bed.

(e) In long continued application of the eyes for near work.

(f) From reflexes from points outside the eye, as from sinus infections and diseased teeth.

II. An excessive irritability of the ciliary muscle may be found in neurasthenia, hysteria, hyperthyroidism and vagotonia.

The symptoms are ocular pains and headaches, with more or less blurring of vision, all being more marked in bright lights or on effort to use the eyes for near work. The condition is readily diagnosed by the history and an examination including the use of a cycloplegic.

The treatment is, of course, to treat the cause, and that is where I feel that many of the textbooks lay too much stress on error of refraction being a cause of spasm of the accommodation. In the great majority of cases it is an important factor, but it is not the only one. There is a saying that a sick eye is a sick eye in a sick body, and I feel that this will hold true in this condition as well. We should refract these cases under atropin and carefully correct errors of refraction, but if we stop there, we too often fail. We should look especially for sinus infection, nasal trouble and infected teeth. Before letting these patients go with a diagnosis of neurasthenia or hysteria, they should have a care-

ful physical examination made by one not too prone to call the obscure neurasthenia or hysteria. Unless you know the dentist, you had better find out what he calls good and bad teeth. Investigate the conditions under which the patient works, especially the illumination.

As a sedative in this condition I have found luminal in doses from 1-2 to 1 1-2 grains once or twice a day almost a certain relief as long as it is used, but unless you have removed the cause of the trouble, the spasm will return when you leave off the drug.

Case I. Miss B., age 28, stenographer. Had to give up her work on account of her eyes. Nervous headaches, eyes painful, blurring of print, worse at night. In addition to her work has been reading a great deal at night.

Wears O. U. + .25 Cyl.  $\times$  90 V = 20/30 plus.

Manifest O. U. — 1.00 S V = 20/15.

Under atropin O. U. V. = 20/15 without glasses.

This patient's trouble was evidently not due to an error of refraction, but she had greatly abused her eyes and there was an underlying nervous instability. As the patient soon moved away, the case was not followed up.

Case II. Miss V. Eyes pained her a great deal. Thought she was near-sighted because she had to hold things so close to see. Trouble started several years ago when she had malaria and read in bed a great deal. Can not stand to read at all now.

O. U. V = 20/30 and not improved by glasses.

Wears O. U. + .25 Cyl. X 90 which do not improve vision.

Under atropin O. U. + 1.00 S V = 20/20.

R/ O. U. + .75S.

After the cycloplegic wore off the trouble returned as before. Atropin was continued for one month, and when discontinued, the trouble returned. Small doses of bromides had no effect, and finally luminal grains 1 1-2 daily was used with great relief. It is not usual for simple hyperopia of this degree to cause so much trouble, and in view of the history, there can be but little doubt that the use of the eyes in a strained position and while weakened by illness was largely responsible for the spasm.

Case III. Miss E., stenographer, age 26. Complains of headaches and pains in eyes.

RE V = 20/40

LE V = 20/50

Present glasses O. U. + .50S do not improve vision.

Manifest O. U. — .50 S V = 20/20

With atropin

RE + .25S = + .25 Cyl. X 135 V = 20/15

LE + .50 Cyl. X 45 V = 20/15

Astigmatic correction was ordered. On investigation it was found that the patient was working with a very bright artificial light shining in her eyes all day. The lights were rearranged and the patient's eyes gave no further trouble.

Case IV. Mrs. G., housewife, age 33. Can not stand to read or sew on account of painful eyes, more troublesome by bright lights.

Without glasses vision RE = 20/40

LE = 20/30

Manifest RE — .50 S = — .75 Cyl. X 180 V = 20/20

\*Read before the Mississippi State Medical Association, Jackson, May 13-14, 1924.



LE — .50 Cyl. X 180 V = 20/20  
 Static, atropin, RE + .75S = + .50 Cyl X 75  
 V = 20/20

LE + .75S = + .50 Cyl. X 75 V = 20/20

This correction, with + .25S off, was ordered and patient was partially relieved for a while, but in a few months she complained that her eyes were as bad as ever. She had a number of defective teeth and refused to have any except the worst ones attended to, in fact it was impossible to get any co-operation from the patient, and at last report, her eyes were still giving her trouble. It may be of interest to note that as long as luminal was used, her eyes were comfortable.

Case V. Mrs. B., housewife, age 33. Left eye has been almost blind for one month and vision in right eye is getting bad. Eyes hurt and burn a great deal. Is very nervous.

RE V = 20/30

LE V = Fingers at 3 feet

Present glasses O. U. + 1.50S do not improve vision.

All her teeth were in such bad condition that she was advised to have them extracted without delay. She returned four months later, having had all the upper teeth extracted, and stated that she felt better in every way. At this time her vision without glasses in both eyes was 20/30, and was not improved by glasses.

Refracted under homatropin, RE + 3.25S = + .50 Cyl. X 75 V = 20/20.

LE + 2.75S = .75 Cyl. X 90 V = 20/30.

It was evident that full relaxation of the ciliary muscle had not been obtained, so atropin was then used with the following results: RE + 3.50S = + .25 Cyl. X 105 V = 20/20.

LE + 3.25S = + .50 Cyl. X 75 V = 20/20.

The last correction was ordered less +.75S. The patient was considerably relieved by this glass, but complete comfort was obtained only as long as luminal was used, so finally she consented to have the remainder of her teeth extracted, and on last report several months later, she was having no trouble with her eyes.

These cases are reported in an effort to show that in refraction as in other ocular conditions, we must often look beyond the eye itself for the source of the trouble.

## DIAGNOSIS IN GYNAECOLOGY.\*

P. MICHINARD, M.D.,

NEW ORLEANS.

Permit me to preface this paper with the confession that it is not intended for the expert specialist, but chiefly for some of you who, like myself, may so frequently have found diagnosis in gynaecology a difficult problem. It is also hoped that it will invite discussion from you that will shed some ray of light to brighten the dark alleys of diagnosis through which I have so often to grope.

For rational and effective treatment there must be a complete and correct diagnosis. In gynaecology, unfortunately, such

is not always obtained, for here we deal with organs that are concealed from view in a cavity that has been aptly called a "box of surprises." A satisfactory diagnosis must accord with the reality, and not necessarily with all the signs and symptoms presented. To rely solely on these is to court failure. It should be remembered that there must be a comprehensive history—at times a difficult and almost impossible task,—thorough examination and careful analysis of all evidence obtained. To not train oneself to pursuing this course is to develop a mental laziness that will prove hurtful.

My private history books have records of seven women who came still suffering after attempts to relieve them had been made by plastic work on the cervix and vagina, with two of them extirpation of the Fallopian tubes and appendix, when the cause of the suffering was rectal ulcers that had been overlooked. Such ulcers frequently cause pelvic and sacral ache, pain along the sciatic and anterior-crural nerve, and encourage constipation and some post prandial abdominal distention.

In ten cases of obstinate constipation the cause was found to be either anal ulcer, fissures or rectal stricture. Every gynaecological case should have a digital rectal examination.

To make a satisfactory diagnosis the investigation should be made beyond the pelvis to which the patient's attention has been called. We have seen metrorrhagia due to cardiac disease and not to uterine pathology. There was sent to me a patient with distinct double salpingitis, temperature 102, but with fourteen suppurating foci in the maxillae. Cure of the pyorrhoea was followed in two months by the disappearance of the tubal trouble. Again, a young married woman was promptly relieved of all symptoms of acute trigonitis and acute albuminuria (20%) by the cure of an infection of several alveolar processes.

Before taking up the main subject of this paper, let me deal with a problem that frequently confronts us: Differential diagnosis between salpingitis and appendicitis.

In my experience some of the salient points are:

Between acute salpingitis and acute appendicitis—In acute salpingitis the stomach symptoms are less pronounced; the pain does not begin at the upper abdomen; the abdominal rigidity is not one sided; there is *greater* tenderness just above Poupart's ligaments and near the median line. There

\*Read before the Louisiana State Medical Society, Opelousas, April 22-24, 1924.

is a higher temperature with a relatively lower leucocytosis. Vaginal examination, though at first, may not discover palpable tubes, will cause greater pelvic *pain than* pressure over McBurney point. The vaginal mucosa will be found to be hot.

Between chronic appendicitis and chronic salpingitis—When the appendix is low in the pelvis, particularly if it is attached to a Fallopian tube that is not palpably enlarged, the diagnosis is not always easy—for here the objective signs are not elucidating. We must depend on the history and the subjective symptoms. In chronic salpingitis even where the tubes cannot be felt, we find the symptoms more marked at the menstrual period. If the disease is in the appendix, intestinal evidence such as flatulence, tympanites, occasional abdominal distress after eating, constipation and diarrhoea will predominate. When the appendix is low in the pelvis there will not be as much pain on pressure over McBurney point than just above Poupert's ligament. Nor should one expect to obtain the characteristic rigidity over the former area.

Another suggestion to bear in mind: Recurring exaggeration at the menstrual period of the appendix symptoms is strongly indicative of combined appendix and tubal disease. In simple chronic appendicitis sharp pain will be caused by pressure over McBurney point; in chronic salpingitis pain will be produced by pressure just above Poupert's ligament and by pressure against the vaginal fornices, where a more or less distinct mass will be felt.

The chief incentive to writing this paper is the diagnosis of that elusive condition, ectopic gestation. The general practitioner has become so familiar with the evidences of appendicitis that he is constantly on the alert for it. Unfortunately, such is not the case regarding ectopic pregnancy. Guided by many text books he is inclined to consider it an acute condition, when, in the majority of instances, it is a sub-acute malady. A careful analysis of most cases with tragic features will often reveal two or three preceding unappreciated, sub-acute milder attacks.

To correctly diagnose tubal gestation is far from being an easy matter. There is not another gynaecological condition that, at times, is so perplexing. Many doctors can recite all the signs and symptoms of it, but fail to recognize it at the bedside. Why? Perhaps because, at times, it rather so re-

sembles other conditions with which they are somewhat familiar that it is not thought of before dramatic evidences of its existence present themselves. I have seen it diagnosed retroversion of the uterus as a cause of the existent bleeding.

At times it is difficult to differentiate it from a ruptured appendix, from acute salpingitis, from a pelvic abscess or from incomplete abortion. I dare say that a correct diagnosis before operation is not made in more than 75 per cent of the cases. The diagnosis may run something like this: 75 per cent ectopic, 25 per cent something else. Here, again, a carefully taken history will help materially. Where the error is most frequently made and where it is most important it should not be made is in mistaking it for incomplete abortion, an error that, by careful analysis, of *all* the symptoms, can be rather easily avoided. The number of such instances is very great. I believe they are not the consequence of ignorance, but are due to a lack of analysis, or to a form of mental laziness.

Between incomplete abortion and ruptured early tubal gestation—In about 218 incomplete abortions that I have treated the first bleeding following the tear of the ovum sac was greater than the uterine haemorrhage of ruptured tubal pregnancy; there was no repeated great pain, though there was more recurring bleeding; the pain was in the median line; there was no rectal tenesmus that in ruptured tubal is almost a constant existing consequence of the irritating intra-peritoneal blood. The uterus was enlarged, almost globular and baggy. The os more or less patulous. No mass could be felt in the neighborhood of the uterus.

In ruptured tubal the attack is sudden, the pain more one-sided than median, more or less intense, depending on the quantity of concealed blood, more bearing down than lacerating. There is rectal tenesmus, and a degree of weakness in keeping with the internal haemorrhage, but that cannot be accounted for by the small amount of external blood lost. The body of the uterus is not much larger than normal. If vaginal examination is made shortly after the attack a boggy mass may be felt behind or to one side of the uterus. There is more nausea and vomiting than I have seen in abortion. Unless there is great syncope there is recurring pain. One should not depend for help on whether decidua has or has not been expelled. The majority of my cases of ruptured tubal did not know. Even

depending on not finding chorionic villi with the curet is misleading, because it has been claimed that in very early normal pregnancy the entire inner surface of the uterus may not be supplied with the villi, and that most of the decidua may have been expelled. The curet then would remove villi—free tissue only. Hence the evidence of the curetted material would be negative. It is better to suspect ectopic and not use the curet than risk using it.

Some evidences that should suggest ectopic gestation—A sudden attack of pelvic pain, which shock even though very slight and of short duration, with a little uterine bleeding, occurring in a woman of child-bearing age should be considered ectopic until proven not to be. Whether a period has or has not been skipped if a loss of blood begins ever so slightly, merely spotting the clothes, and continues for a few days, associated with a little or slightly severe *one-sided* pain—not necessarily of a lacinating nature without frequent desire to defecate, and should this spotting recur at intervals of a day or two, haemorrhage *within* an unruptured pregnant tube must be thought of, especially when occurring in a woman who has long been sterile. Even though the symptoms should, at first, be considered due to threatened abortion, such investigation should be made. In threatened abortion the pain is in the median line and not one-sided, and the uterus is enlarged. At first the tube may be too small to be felt, but a second examination made two weeks later will find it palpably enlarged. If in the meantime the symptoms increase without rectal tenesmus, it would indicate further bleeding into the pregnant tube, but not rupture. This statement is based on records of fifteen unruptured tubals I operated. In nearly all of these there was nausea; only a few vomited.

Where the tube cannot be easily felt and the symptoms still suggest ectopic, the patient should be examined under deep anaesthesia. When the pregnant tube is palpable it will be felt the size of your thumb or much larger, according to the extent of the bleeding; it will be boggy, to one side or behind the uterus, somewhat tender, but not as sharply painful as a salpingitis. The uterus now will be felt to be slightly enlarged, it will not be jugged shaped as in early uterine pregnancy. There will be very little rise of temperature, and the vagina will not feel hot as in pelvic inflammation.

Often during the early weeks of tubal gestation there is formed a little erosion of

the tube with slight bleeding from torn, very small vessels. No blood may escape from the uterus, but there will be more or less sharp, colicky, one-sided pelvic pain with some nausea for a short time, but no weakness. After a day or two the pain ceases, only to return with greater intensity a few days later. The woman may think she is suffering from intestinal indigestion. But during the second spell there will be some uterine bleeding. The internal bleeding is not severe enough to cause much weakness. If the condition is not recognized early a third and more severe attack will soon follow. When these early symptoms present themselves in a woman of child-bearing age, a slight ruptured tubal should be suspected and sought for.

Occasionally women presenting these signs have recovered completely. They may have been tubal abortions, the blood and embryo being absorbed by the peritoneum and the tube regaining its normal condition. No matter how slight the evidences of rupture might be, no matter how complete the recovery might appear, it would be proper to keep these patients in bed and under careful surveillance for one month, for I have seen a few most unexpectedly flare up in three weeks with great internal haemorrhage. I have seen this unexpected bleeding happen a few days after vaginal examination failed to palpate either a boggy mass, an enlarged uterus or an oversized tube. I mention these unusual cases as a warning against the pitfalls we are liable to encounter.

Rupture of the tube may occur irrespective of whether a menses has not been missed. I have seen it occur at a menstrual time when there had, apparently, been no skipping. In these cases all previous menstruation had been rather painless, and only of five or six days' duration. But this time it began with violent, sharp, bearing down pains more marked on one side. There was an unusual weakness and much greater onset of flow than usual. Vomiting occurred that was absent at all previous catamenias. There was no fever. Such deviation from the normal menses should arrest our attention. In these cases the flow does not cease completely, but continues intermittently, with occasional slight pains, for days. This irregularity of bleeding is more suggestive of ruptured tubal than any amenorrhoea.

The rupture may occur, and most frequently does, two or six weeks after a missed menses, when the symptoms will be similar to those just described, excepting in

those cases where the rupture is large and the bleeding great with such syncope, etc., as to make the condition self-evident.

Some of these milder and, consequently, deceptive cases, so little impress the victims that they go to places of amusement; and are so erroneously diagnosed that they are treated with uterine sedatives, and even threatened with curettage. But a sudden aggravation of all symptoms, with syncope, causes a realization of the gravity of the condition.

Should the rupture be of the right tube appendicitis might be thought of. But in appendicitis there would be greater recurring vomiting, there might be diarrhoea, but not such rectal tenesmus as exists in ruptured tubal. There would be right abdominal rigidity, pain greater to the right of or near umbilicus and there would be some fever. A carefully obtained history would most probably reveal some previous attacks of indigestion, pain about the McBurney region, and other subjective symptoms of appendicitis. In acute appendicitis there will not be the palpable mass behind or to the side of the uterus. Somewhat resembling the initial attack of a slight rupture may be a sudden acute congestion of sub-acute salpingitis. Here the history of the case, and the fact that a resisting tubular mass of extreme tenderness may be felt on both sides of a small uterus should indicate salpingitis. Another condition that is confusing is rupture of a corpus luteum cyst, in which there are pain, bleeding, nausea and great weakness. I do not know how to differentiate between such a rupture and that of a pregnant tube.

Or, as I have seen several times, the rupture occurs at a regular menstrual time, the symptoms continuing a few days, disappear entirely until the next menstrual time when there is a repetition, only much more severe, of all the previous symptoms. No matter if this second attack is followed by a period of rest ruptured ectopic must be looked for. On several occasions I opened the abdomen and removed from one-half to almost a pint of clotted blood in cases giving this history, the initial rupture having occurred ten weeks before operation. And some of these, in the meantime, had been moving about the city; five of them having traveled without much inconvenience a distance of many miles from the city. These cases are mentioned to impress on you the gravity of a sometimes apparently harmless condition.

Where the blood remains any length of time it becomes walled off by pelvic exu-

dates and by adherent intestines and omentum. This peritoneal irritation may occasion a rise of temperature with a certain amount of pelvic pain, bladder irritation and cause a semi-fluctuating, bulging mass against the posterior vaginal fornix, giving the examiner the impression that he is dealing with a simple pelvic abscess. So great have I seen this accumulation of coagulated and semi-liquid blood in the pelvic cavity that it could be felt for some distance above Poupart's ligament; and if it happened to be on the right side greatly simulated a peri-appendix abscess.

To arrive at a correct diagnosis a clear account must be obtained of the early history of the case. Also a leucocyte count will assist. For if it be an appendix abscess the count will be very high. There will be a history of early pain, vomiting, perhaps diarrhoea and fever, but no bleeding. If the accumulation be due to tubal or broad ligament infection there will be gotten a statement of rather gradual increase of general (not one-sided) pelvic pain, vesical disturbance and long existing fever. While if of ruptured ectopic there will be the early suddenness of attack with the characteristic bleeding and other signs enumerated of this condition. In many cases it requires much care and patience to obtain the correct data. So baffling are the signs that often a diagnosis cannot be made without the aid of the exploring needle when the withdrawal of either pus or dark blood will decide the case. At the time of the exploration the operator and patient should be prepared for immediate laparotomy should blood and not pus be found by this vaginal puncture.

Several years ago, in two such cases, the exploring needle caused so great an internal bleeding from the ruptured tube that the patients would have died had I not done an immediate laparotomy.

#### *Summary:*

1. A woman of child-bearing age seized with acute severe abdominal pain with shock or syncope, even though of short duration, should be considered a possible ectopic pregnancy until proven not to be such.
2. The more attention is directed to irregular bleeding than to amenorrhoea the less often will one fail to recognize ectopic.
3. With very few exceptions the longer the amenorrhoea more likely is the pregnancy to be intra-uterine.
4. A leucocytosis quickly following abdominal pain, vomiting and shock *without*

an elevation of temperature should be attributed more to ruptured tubal than to appendicitis.

5. To depend on a history of having or not having expelled decidua is to court error.

6. When there is evidence of ectopic gestation and no mass can be felt while the patient is awake, or if there is doubt whether there is early pregnancy in an abnormal uterus it is advisable to examine the patient under deep anaesthesia before operating.

7. When in doubt as to whether the condition is an incomplete abortion and curettage is contemplated don't do it.

#### SOME IDEALS IN TONSILLECTOMY.\*

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Although we may sometimes overlook it, there is more to be considered in planning a tonsillectomy than the mere removal of two small masses of offending tissue. The results following this little surgical procedure are so far from being universally perfect that we still have a long way to travel before we reach the desired goal. We have made a decided step in advance from the old tonsillotomy, and the *dictum* "Get all the tonsil" is practically universally accepted, but we must remember that we must not get all the tonsil at the expense of other structures. And we frequently fail to do the one, and not infrequently do the other. It is by no means an uncommon thing to see incomplete removal of tonsils, or a throat structurally damaged in the operation, and sometimes we meet a throat that has been badly damaged and still contains considerable tonsil tissue. It is these things that I wish to discuss with you, and I am especially glad to be assigned this place on the program since the majority of tonsillectomies are done by general surgeons.

Back in 1915, J. R. Fletcher (*Annals Otol., Rhin. & Lar.*) laid down these requisites: "When we agree upon a technic which completely removes the tonsil in its capsule, does not open the aponeurosis of the superior constrictor muscle, does not injure the aponeurosis of the palato-glossus or palato-pharyngeus muscles, which conserves every bit of the membrane re-

flected over the tonsil, which prevents fusion of the three muscles named and leaves a linear scar in a rudimentary fossa, which does not injure the voice and lessens greatly the frequency of the secondary hemorrhage, we will have achieved the ideal in the light of our present knowledge."

You will note that there are several requisites. Take them one at a time and see what they mean.

First. "Completely removes the tonsil in its capsule." How often do we fail in this? Oftener, I venture to say, than we realize, or care to admit. About three per cent of my tonsil surgery has been to clean up throats after so-called tonsillectomies. Some of the cases I furnished myself—some came from others—some of these others have pretty big reputations—two have national reputations. I have finally arrived at the conclusion that the operator who never fails to do a complete job is the blood-brother of those obstetricians who have never torn a perineum. You may remember, there are two of them—one never confined a woman, the other doesn't know a tear when he sees it.

This does not mean that we should not do our best to get a clean job. Obtain a thoroughly dry fossa and examine it carefully before letting the patient leave the operating room. Take plenty of time. Speed, the point on which so many operators pride themselves, is generally the least consideration. As I look back over my own work, I can recall but one case in which I did not have all the time in the world at my disposal. This was a four year old boy with acute nephritis and a leaky heart. The family physician absolutely barred the use of ether. Naturally the anesthetist would have been unhappy at any waste of time, but I must do him the justice to say that neither by word nor act did he suggest my hurrying. Quick work is all right, in fact desirable, but hurrying generally manifests itself in hemorrhage or poor results.

A point that suggests itself here is the consideration of results in patients operated on by some one other than one's-self. There is probably no operation in which the results are so criticized and "cussed." I have heard men carry on over a bit of tonsil, or even granulation tissue, in the fossa as if the operator had wilfully mutilated the patient, when it was more than an even bet that they would have given no better results themselves. It may be taken for granted that every operator does the best he can in every case. Why not give

\*Read before the Mississippi State Medical Association Jackson, May 13-14, 1924.

him the credit for it, and be fair enough to say that it is a regrettable but not unusual occurrence?

Second-third—Avoid damage to aponeurosis of muscles. This accident oftenest comes from blunt dissection, which denudes the muscle fibres with resultant scar formation that is frequently a source of permanent discomfort. The old Hurd dissector and its various modifications are to blame for most of these conditions.

Fourth—Conserve every bit of the reflected mucosa. This point is never sufficiently stressed. No operation, as described in any text book that I have seen, fails to remove from a quarter to one-half inch more mucous membrane, measured semi-circularly around the arch, than should be taken; and very few operators seem to give this point the slightest attention, a spectacular removal of the tonsil in one swipe being apparently the desired ideal.

Consider for a moment the technique of the operation on the free, hypertrophied tonsil. It protrudes beyond the pillars and can be pushed or drawn well out into the throat. That's easy—anybody can take that out. We put our guillotine or snare over it, make pressure or traction as the case may be, and shut down slowly. The tonsil projects further and further into the throat and finally peels out nicely leaving a cavity more or less lined with a pearly aponeurosis, to which we point proudly, esteeming ourself an operator of parts, and forgetting for the moment that as the tonsil was pushed out of the fossa it drew with it the reflected mucosa, and even that covering the inner walls of the pillars and arch, and that the more completely it was dislocated through the fenestrum of the guillotine, or the loop of the snare, *before this began to cut*, the greater the amount of membrane was removed. This is all unnecessary, unsurgical, and may be avoided by freeing the mucosa with a knife and applying the snare or guillotine beneath it. This takes a little more time, and many of us specialize in speed, but we have no right to build up a reputation for speed at the expense of the patient. He has to live with that throat the rest of his life and removal of the membrane causes fusion of the pillars.

Fifth—Unpleasant effects to the voice are usually produced only by very considerable traumatism or the removal of considerably more than just the tonsils, but it is really remarkable how much damage is done, at times, without affecting ordinary conversational tones. The singing

voice is quite another matter, and as the majority of operations are done before the voice is developed we can not arrive at any estimate of how many Melbas or Carusos are literally slain in childhood. Apart from the cases that are severely traumatized, the singing voice may be affected by damaging the aponeurosis of the muscles or the excessive removal of mucus membrane, both of which we have already considered. When this is done, the pillars and the superior constrictor may become matted together to an extent that impairs their individual mobility. I am entirely aware that some of our best operators do not consider this a disadvantage, in fact one nationally-known laryngologist has recently advocated sewing the pillars together, so that they may unite and obliterate the fossa, but I have never been able to understand how the matting together of three muscles having different functions can fail to produce an abnormality.

Sixth—The final proviso, the diminution of post-operative hemorrhage, is one over which every operator has racked his brain one time or another. Frequently we hear it spoken of as a matter of luck. For the most part it means an error of judgment, such as operating in the presence of inflammation, or of technique, or the very common error of letting the patient move about too much shortly after the operation.

Secondary hemorrhage is an entirely different matter. My experience is limited to four cases, over-exertion being the probable cause in all of them. I think it may pretty generally be attributed to the fact that tonsil operations are looked upon as small affairs, not worthy of serious consideration. Such hemorrhage is unusual, and rarely alarming except to the patient and family.

In this connection, the question comes up: what constitutes hemorrhage? The Surgeon-General, in 1918, asking for reports on tonsillectomy hemorrhages, defined it as "Bleeding that does not yield to simple pressure." Accepting this definition, I have never seen a delayed primary hemorrhage that wasn't due to an error of the operator. I take mighty little stock in hemophilia. I know a doctor who, when a boy, was acquainted with one of these rare birds, and when I was a medical student it was current gossip at Tulane that a baby had once died in the Charity Hospital of hemophilia.

In 1918 I did a tonsillectomy on a supposed hemophiliac—at least the patient claimed that he was one, and he did have

a coagulation time of more than eleven minutes—but there was no material bleeding. These instances are as close as I have ever come to hemophilia, and I am beginning to consider it extremely significant that so much is said about hemophilia in connection with tonsil operations, and so little with any other. Especially am I skeptical when a delayed hemorrhage is said to be from this cause. Hemophilia would manifest itself at operation.

Since no man's judgment and technique can always be 100 per cent perfect, and since, also, we are working in a vascular area, we are going to have bleeding as long as we do tonsillectomies. Why not admit these possibilities, do our best to prevent their materializing, and when we fail, as we will occasionally do, meet the situation frankly and not try to hide behind the thin veil of hemophilia.

One might, perhaps, add another to Fletcher's provisions—that of safety and comfort to the patient, which in the majority of cases in adults is unquestionably promoted by the use of local anesthesia.

I have purposely avoided consideration of the different types of operation. What fits the ideas and abilities of one operator is totally unsuited to those of another—as the Sluder method is said to be 99 per cent perfect in the hands of its originator, while Ballinger was dissatisfied with it, in his own work, in 30 per cent of cases. But whether one be a believer in the most complicated technique, or simply scoops the tonsil out with his finger nail, he must consider the final result, and so shape his work as to subject his patient to the least possible danger and discomfort and to leave the throat undamaged.

#### DISCUSSION

Dr. W. B. Dobson (Jackson): I just want to say that in my limited experience, and with the increase of tonsil surgery by every man who can use a knife, we are noticing some bad results and some scar tissue. Of course we all get some bad results; the man who does not is not removing tonsils. My experience has taught me that most of our faulty results are due to local anaesthesia. All of those cases where I have used a general anaesthetic, I have perfect throats left with less scar tissue. It is due to the fact that the oedema produced by the injection of the drug is so great that it is hard to hew to the line. In other words, you are bound to get some soft tissue in conjunction with the tonsil.

Dr. George E. Adkins (Jackson): A few little things I would like to discuss in regard to this paper which I think is very timely. The main point I want to make is that the essayist is not striking at some man because he is taking out tonsils and turning around and doing some other operation. The fact that only 7 per cent of throat

and you do not get the lower pole of the tonsils are satisfactorily removed bears him out in the statement. I venture to say that more than 7 per cent of Doctor Howard's cases are satisfactorily done, but there is a man, and possibly three or four, near him that are turning out good deal lower percentage than he is. A man should equip himself for this work as well as any other line of work. It does not mean that because a man does some other operation he should not remove tonsils. Some of the best tonsillectomies I have seen were done by the general surgeon. But then we see men just out of college who think it looks easy and they proceed to do tonsillectomies, and they are the fellows that lower the percentage of satisfactory results.

The doctor makes the point of splitting the capsule. There is such an operation described, but I would like to see a man do it. I have never been able to split the capsule and bring out one layer and leave the other intact.

When it comes to speed, I feel that belongs to the man who does the work. Personally, I think speed under a general anaesthetic is one of the best things we can have. A slow tonsillectomy under a general anaesthetic is a great deal more likely to result in aspiration pneumonia than if you get in and come out quickly.

As to suturing the pillars, some of the best men in the country are doing a closed operation just like an abdominal operation, closing the cavity. You are suturing together three muscles that have different functions, but when they are sutured together they come out about as well as the balance.

As to bleeding, I agree that if you do have excessive bleeding—not including hemophiliacs—that it can be stopped. There is no necessity for excessive bleeding in a normal tonsillectomy.

With reference to general or local anaesthetic, Doctor Dobson said he gets better results with a general. The reverse has been my experience. I can turn out a better throat, one that suits me better, under local than under general anaesthetic.

Dr. E. F. Howard (Closing): Doctor Adkins must remember that I made a distinction between speed and quick work. By quick work I mean getting through promptly and comfortably without any waste of time. By speed I mean operating against the clock. There are many operators, not only in this line but in general work, who pride themselves on a tonsillectomy in one minute, an appendectomy in five minutes; who keep mentally an eye on the clock when they are doing it. The man who does that is simply riding for a fall, and I will leave that to Doctor Adkins; he can keep watching the clock if he wants to. Personally, no man who operates by the clock is ever going to operate on me, or anybody I have any interest in.

Regarding a local anaesthetic, I think possibly Doctor Dobson has the right idea. I believe patients who are going to be operated under local anaesthetic should be selected very carefully. If a patient has fairly good control of his throat I see no difficulty in operating under local. I do a good proportion of adults under general anaesthetic; but where a patient can control his throat, a local anaesthetic is certainly the choice. The great trouble in these cases under local anaesthetic comes because just as you shut down the snare the patient contracts his throat and you do not get the lower pole of the

tonsil. Therefore you have to be particularly careful in selecting your cases. You can, however, in the ordinary case that does not control his throat well, have him come to the office every day for a week or ten days, and train him in the way he should hold that throat long enough to get the tonsil out; because, even operating slowly, it is not an operation that should take all day.

## THE ACUTE ABDOMEN, FROM THE MEDICAL STANDPOINT\*

ARTHUR A. HEROLD, M. D.,  
SHREVEPORT, LA.

The acute abdomen has been, for many years, a favorite medical topic. My excuse for bringing the subject before you, today, is not with the idea of teaching something new, but, rather with the hope that, by emphasizing certain points in the diagnosis and treatment of conditions presenting acute abdominal symptoms, we may have a refreshing discussion that is liable to inure to the benefit of some of our patients.

There is a difference between what might be termed "Acute Abdomen" and "acute conditions in the abdomen;" too often are extra-abdominal conditions, presenting acute abdominal symptoms, overlooked and a hasty diagnosis, with laparotomy and resulting chagrin for the conscientious man ensuing.

Under this head, I refer, especially, to:

First. Acute abdominal pain, often seen in pneumonia, which might be either purely reflex, due to diaphragmatic pleurisy or to a localized peritonitis; 2nd. The extra-peritoneal condition of colic or pain from renal calculus, ureteral stone or kink, etc.; 3rd. Last, but not least, gastric or vesical crises of tables dorsalis.

From the medical standpoint, I contend that, too often, appendices have been sacrificed and gall bladders drained, through neglect to consider the possibilities of these extra-abdominal causes of acute abdominal symptoms!

Now, for acute conditions in the abdominal cavity, we might enumerate:

First. Acute appendicitis, which is said to be the cause in at least 80 per cent of these cases; 2nd., Acute conditions of the stomach and duodenum, whether gastritis, gastro-duodenitis or acute ulcer, with or without perforation; 3rd., Acute enteritis, entero-colitis or colitis, due, of course, to injudicious dietary, food poisoning or other infections (including typhoid, amoeba,

etc.); 4th. Acute conditions about the gall bladder and ducts, frequently involving the pancreas with resulting acute pancreatitis; 5th. Acute intestinal obstruction, from volvulus, intususception, etc.; 6th. Acute ulcerations due to trauma, cutaneous burns, embolic and thrombotic conditions; 7th. Acute conditions, arising from the pelvis—more common in females; 8th. Acute localized or general peritonitis, associated with or secondary to, any of the above-mentioned conditions.

For early diagnosis, we must depend, principally, on the history and clinical findings. The clinico-pathological and X-ray laboratories are aids, and often valuable aids, in diagnosis, but they should not be relied upon to make *The Diagnosis*; the more acute the condition, the more applicable is this statement. It would be useless before this assembly and too time-consuming to attempt to dwell on the *Clinical* diagnosis of all of the above-mentioned conditions and diseases, but I want to say a few words about the laboratory side.

Briefly, I shall dismiss the X-ray participation in the diagnosis; its greatest value is in differential diagnosis, where urinary calculi are suspected and sometimes in gall bladder conditions; there is a probability that its use in the latter condition may grow, now that the tetrabromphenolphthalein of calcium technique is being perfected. However, please do not understand me to be decrying the merits of X-ray diagnosis, in general, for I feel that, today, it is an invaluable aid in chronic complaints; but, in the matter under discussion, it is neither practical nor prudent to disturb conditions, with elimination, opaque meals, etc., in order to get a satisfactory picture. Often rest and *Early* diagnosis are life savers.

As to the clinical laboratory: Every case should have as early urinalysis as possible, whether immediate surgical interference is contemplated or not; often, by this, we might learn of a renal or diabetic condition, which would cause postponement of operation or determine expectant treatment; then, again, it might show evidence of unsuspected urinary calculus or infection, which would cause a change in diagnosis.

Next, the blood examination. In the absence of a history of the illness a physician, confronted with an unconscious man, with an acute abdomen, should always consider the possibility of a typhoid perfor-

\*Read before the Louisiana State Medical Society, Opelousas, April 22-24, 1924.



ation; the Widal reaction, while not infallible, is often a quite valuable aid. But the main consideration of a laboratory is the blood count; while an increased leukocytic count, especially with a relatively higher increase in polymorphonuclear neutrophils, is of great importance and often clinches a diagnosis of suspected acute inflammatory trouble, still there are pit-falls; e.g., this is marked in pneumonia, a disease, which, as mentioned above, should always be excluded; but, too often, indeed, in acute streptococcic appendicitis, with perforation or gangrene, we encounter a normal count, if not a leukopenia. Many such cases have been reported, but let me briefly relate one, from the files of the North Louisiana Sanitarium, in which, although there was a slight leukocytosis, it was, in no measure, proportionate to the intensity of the infection.

Patient, S. D., admitted May 2, 1921, complaining of "pains in stomach" of 24-hours duration; temp. was 98.2, pulse 80 at 1:30 p.m.; temp. 98.2, pulse 120 at 5:30 p.m. Leukocyte count at one was 9,200; at 5:30, it had risen only to 10,200. Abdomen opened at 7 p.m., and an acute gangrenous, ruptured appendix found and removed; the patient, in spite of an acute nephritis and marked icterus, made, practically, an uneventful recovery. This gratifying result would probably never have been obtained, had the surgeons waited for a definite "tip" from the laboratory.

Now, as to medical treatment. It has been said that "there is no medical treatment for acute appendicitis;" to this, I do not absolutely subscribe. Although I will grant that a diseased appendix outside the body is preferable to one inside, and, although I will confess that, when the essayist, personally, was seized with an attack of appendicitis one morning, he had his appendix in a bottle the next morning, I will not dare to stand here and say about this, like Reuben at the circus said about the giraffe, "there ain't no such animal." Under certain conditions, temporizing must be practised, the length of time that this is permissible depending upon the circumstances causing it.

A physician, caught unawares, in an inaccessible place, with no assistants and no surgical armamentarium, but with a clear-cut case of acute appendicitis—what is he to do; treat the patient expectantly or knock him in the head?

Again, how about the cases complicated with hyperglycemia, puerperal infection, advanced tuberculosis, etc.? At least, the

first two conditions mentioned must be tidied over, before patient is ready for the knife. I admit that, as a general proposition, early operative interference is best, but we should all be posted on the expectant treatment, the general principles of which were laid down many years ago by Ochsner and amplified by Murphy. I know a number of people who have had evidences of acute appendicitis and who have apparently recovered, without surgical procedure; many of you, doubtless, can also recall such cases, who have refused operations, some avoiding it and other postponing it; they were "playing with fire," it is true, but they got by with little scorching. I mention this, not with the idea of advocating medical treatment, but simply to show that, for various reasons, it is often indispensable; in it, however, there are "don'ts" more important than "do's" and I wish now to report a case, brought in to me, by a fellow-practitioner, in a nearby town, who had undoubtedly been told, in his college days, how to manage these cases, and let us see what he actually did, viz:

E. S., aged 11, with a history of two previous attacks of what was diagnosed as appendicitis, was seized with a spell of pain in abdomen, nausea and vomiting five days before admission to North Louisiana Sanitarium; after the child had been ill for two days, with no bowel movement, my friend was called in and told that, although salts and oil had been administered, they were ineffectual, as they were promptly vomited; he then administered another dose of salts and (to use his words) he "stood over her and saw that she kept it down;" after a few hours, bowels moved, but patient collapsed and was brought to Shreveport in that condition; temp. 97.8, pulse 108 and thready, cold sweat, abdomen rigid, but practically painless. A ruptured gangrenous appendix was removed; convalescence rather stormy, but patient made a satisfactory recovery. Had this case been properly handled, medically, surely the surgery would have been simpler and safer, with easier and shorter convalescence.

Along this line, I cannot but refer to an excellent article by Dr. P. Graffagnino published in December, 1922, *N. O. Medical & Surgical Journal*, in which he refers to "Acute Appendicitis—a surgical problem" and, in reviewing cases brought to New Orleans Charity Hospital, after having been treated (or mistreated) by family physicians, he deplors the fact that, in spite of teachings to the contrary, so many of

them will persist in administering purgatives. *Why, gentlemen, if I had my way, I would have printed across every diploma, in red ink, these words: "In acute abdominal conditions, make your diagnosis before treatment; when in doubt, don't purge."*

Much has been written as to the relative merits of surgery and medicine in gastric and duodenal ulcers, in general. I believe that I am voicing the consensus of present day opinion when I state that the *ACUTE* cases are all medical, unless there be definite evidence of perforation or uncontrollable hemorrhage.

Time will not permit me to go into detailed account or statement of all conditions mentioned; as a general proposition, however, we might say that all ulcerations in the intestinal tract—typhoid, syphilitic, due to burns, etc.—should be considered as of medical therapeutics, except where there is perforation, definite obstruction or serious and persistent hemorrhage.

Acute gall bladder cases are *not*, as a rule, medical, as contrasted with the chronic ones, which often yield brilliant results through non-surgical drainage.

Sometimes, we are confronted by a situation in acute or sub-acute conditions which make us hesitate as to proper procedure, as this case will exemplify:

W. T., aged 14, admitted to North Louisiana Sanitarium, with history of having been run over, diagonally across the abdomen, by the wheel of a school-van, one month before. Family physician being called, a large dose of calomel was (of course) promptly administered; the effect was apparently satisfactory and the boy improved for one week, after which he had an irregular distention and evidences of intestinal obstruction; from this time, he would retain only small quantities of buttermilk and, when seen by us, he had lost 15 pounds in weight; we temporized for 8 days, attempting to improve his general condition, which seemed promising for a part of the time; then, as he began to lose ground, we advised surgical exploration; breaking up the obstructing adhesions, there was exposed closed-over intestinal perforations, from which fecal matter poured out. He now presented a picture of numerous recently-localized walled-off acute peritonitis areas, complicated by more or less acute tuberculous peritonitis, on which the operation had engrafted an acute septic peritonitis. In spite of free drainage, the outcome was rapidly fatal;

continued medical treatment would also have ended the same way.

All in all, medical and surgical men usually consult and agree, generally speaking, on the diagnosis in acute abdominal conditions. However, although we also concur as to the indications for treatment *and the treatment* of many things, especially the acute appendix, under favorable conditions, there are some points on which there probably never will be unanimous agreement; honest disagreements work to the benefit of the patients, for, to have our ideas and conclusions challenged makes us think a little more and, perhaps, see the other side of the proposition; or, to express in another way—in the words of Mark Twain—"it is the difference of opinion that makes horse races."

#### DISCUSSION

Dr. C. H. Mosely (Monroe): I do not know of any subject that would be any more interesting to a doctor than pain in the abdomen. There is no subject that demands an immediate diagnosis like pain in the abdomen. The simon-pure operating surgeon, the simon-pure gynecologist here meet their reward. A man that cannot diagnose a lung condition, a man that does not know aortic insufficiency, has no business doing surgery. A man that does not know something about nephritis, something about the toxemias of pregnancy, something about metabolism, has no business doing surgery. You cannot divorce medicine and surgery. The best internist in the world should do the best surgery. 75 per cent of surgery is horse sense—25 per cent is technique.

The doctor's paper is interesting from a surgical standpoint. The people who served in the army saw people with tuberculosis, and on stripping these soldiers saw the telltale scar of an appendectomy. 35 per cent of the soldiers we stripped at El Paso had scars on the abdomen. I saw a baby eight weeks old with appendicitis. The appendix masquerades, and regardless of your laboratory findings, regardless of your care and what you do or what you think, you must admit some of your faults. You cannot be right but about 90 per cent of the time. There are 10 per cent of failures in all things, and we people who do not employ laboratory facilities will make failures in our diagnosis.

The chief cause of acute abdomen is obstruction, and remember that in obstruction you have lack of temperature and the intestine makes a noise. You give that man a dose of morphine and you destroy the very thing that is important. If you leave the man alone for 48 hours, what will happen? He will die. When the operation is done immediately the outcome as a rule is favorable.

Dr. S. J. Couvillon (Moreauville): I was indeed impressed with Doctor Herold's paper, particularly with the title, "Acute Abdomen." This phrase is somewhat of a new one in medical literature and not so long ago I came across this phrase for the first time in a medical journal and became familiar with it, and about two hours later I had a call to see a patient who had violent pain in the region of the abdomen, preceded by

a chill. On examination I found a subnormal temperature, the patient (a husky man 175 pounds in weight) almost in a state of collapse, with rigidity all over the abdomen and some tenderness over Mc. Burney's point.

My diagnosis of course was acute appendicitis and I ordered the patient to go to New Orleans at once for surgical interference. I used the phrase "acute abdomen" in pronouncing my diagnosis and he asked me, what is that? I said, "It is a pathological condition in your abdomen that demands an immediate operation." I immediately took the patient to New Orleans and of course a blood count was made. It was found extremely low and the surgeon disagreed with me on the diagnosis. He suspected the condition to be a stone which had made its way from the right kidney to the bladder and that I had slipped on the diagnosis. He referred the man to a urologist, whose findings proved negative and the doctor finally told me to take the man home. I insisted on an exploratory incision and he asked me, would I assume the responsibility? I said I would. On opening the patient we found a gangrenous appendix which he removed, and the patient made an uneventful recovery. I bring up this case to show that we should always open up a patient presenting such symptoms and not depend altogether on blood counts, especially since in a gangrenous appendix, it is usually low."

Dr. J. E. Knighton (Shreveport): Doctor Herold referred to extra-abdominal conditions that produce pain in the abdomen. I want to mention a case that was recently under my observation which is a good illustration of that point. Doctor Willis received a telephone message from a doctor in a neighboring town in Texas to be prepared to operate immediately upon a patient he was sending over. They were not waiting for a train but sending the patient by automobile. This doctor said that apparently the patient had a ruptured gall bladder and he thought should have immediate operation. Upon arrival we found the following:

Patient was a man about forty years of age, giving a history of having had some pain in the upper right abdomen a few days previously. A short time before the message was sent the pain became acute, the patient seemed prostrated, and it occurred to the doctor that he might have had a rupture of the gall bladder. On going over the patient we found that he had a rather rapid pulse and respiration, elevation of temperature a leukocyte count of between 20,000 and 30,000, with the polys predominating, a very rigid board-like abdomen, particularly on the right side. He complained of pain and intense soreness and tenderness over that area, but on going over his chest we found a dullness at the base of the right lung with a friction rub which to my mind meant that the patient had pneumonia with diaphragmatic pleurisy which caused the pain to be referred to the abdomen. So we decided the patient did not need any operation, and with medical treatment for acute lobar pneumonia he went home all right without being operated on.

Dr. I. I. Lemann (New Orleans): There are several points that I would like to reinforce in discussion. One that Doctor Knighton has just elucidated, is the matter of referred pains in the abdomen from the thoracic region. A man was referred to Doctor Carroll Allen a few months ago, for immediate operation because he was

thought by one doctor to have acute appendicitis, and by another to have acute gall bladder disease. The man had pneumonia. He was not operated and promptly got well.

Years ago I saw an old man of 70 who had terrific pain in his abdomen and seemed to be almost dying from collapse, but whose chest revealed a pleural rub, and the simple application of adhesive strips relieved his pain immediately.

The next point I would like to emphasize is the disappearance of pain in fulminating, acute, inflammatory, and gangrenous conditions within the abdomen. I recall very vividly a boy who was seized suddenly with abdominal pain while at stool. He had no fever but his blood showed a leukocytosis of 25,000 to 30,000 with a correspondingly high polymorphonuclear count. I asked immediately for a surgical consultation, to the great surprise of the parents, because the boy did not seem to be particularly ill. When Doctor Parham and I went there in a short time the boy had absolutely no pain and his abdomen was perfectly soft. It took more than an hour's constant argument to convince the parents that the boy needed immediate operation. When the abdomen was opened there was a monstrous enlarged, inflamed appendix, red and covered with fibrous exudate. A few hours more and we should have had perforation.

The third point I wish to speak about is one that Doctor Herold mentioned in his very pleasing fashion, namely, the necessity of providing some expectant or medical treatment in case of inflammatory abdominal disease where there is a hyperglycaemia. I venture to disagree with Doctor Herold and to say that where you have an acute inflammatory disease in the diabetic you should operate all the sooner; that it is now perfectly safe with the use of insulin, and with the proper anaesthetic, preferably ethylenegas, to do all on the diabetic that you can to a person with a normal metabolism.

Dr. W. P. Bradburn (New Orleans): There is one point that has not been emphasized, and that is, let us interpret the condition, especially within the acute abdomen, in the light of the clinical findings. Let us examine our patient thoroughly clinically, using the laboratory as a guide, and where there seems to be a difference between the clinical and the laboratory findings, let the clinical side rule.

There is another point, going to the other side, and that is in using the expectant treatment. Where we follow this procedure I think laboratory work will help us in differentiating and determining when the expectancy should cease.

A woman 73 years of age with a pulse of 120 had abnormal pains for 24 hours; she had taken purgatives and was perfectly comfortable except for pain in the right fossa. We sent her to the hospital and the blood count showed 12,000 with a differential of 79. Examination of the urine showed heavy albumin, some hyalin and some fine and coarsely granular casts. We decided not to operate, as we thought the medical condition was rather more serious than the surgical. The next day we took the blood count, which had gone up to 14,000 and dropped in the differential. We kept on in the same way and on the fourth day she had a practically normal temperature the patient left the hospital in a week, with kidney function much improved.

Dr. T. J. Dimitry (New Orleans): I wonder if a case came to me, of abscess in the eye, and

I removed the eye if anyone would ask me; Why the abscess? I rise as an ophthalmologist to ask those who are treating of this subject, why the appendicitis? Did that condition originate without a cause, and if it did not originate without a cause why then it is that a surgical procedure should be entirely adopted and even after its removal other things ignored? When the appendix is once removed what becomes of the infection that caused the appendicitis? Can a true appendicitis come about *sine causa* (?)

Dr. D. I. Hirsch (Monroe): After listening to the discussion it seems to me that one point Doctor Herold brought out has been overlooked. Frequently we see these acute conditions in the abdomen that have been purged and given morphine. They are referred to us at the hospital and we at sea, especially because of the morphine. Extra abdominal cases do occur, but there has been too much stress laid upon extra abdominal conditions causing reflex conditions in the abdomen itself, because generally they are in the minority, and it is up to the surgeon to determine whether it is in the abdomen. A man in the country without facilities to make examination is up against it when it comes to diagnosis, and if we were in his position we could congratulate ourselves if we did as well.

I have been more unfortunate than most men. I have seen quite a few cases of intestinal obstruction. My experience has been that in those that have been referred, I have had very few recoveries; but the causes that I saw in the beginning and that I operated early have recovered, with one exception. The night I left home I saw a patient that illustrates the rapidity with which diagnosis can be made. This man was seen 24 hours before I saw him by a confrere, and he was also seen in consultation by Doctor Snelling. He had a leukocyte count of 15,000, intense pain in the abdomen, vomiting and temperature. The next afternoon at three he was brought into the hospital with a leukocyte count of 9,000, a normal differential, no pain in abdomen, and a diagnosis of intestinal obstruction was made. He was operated and obstruction found. The diagnosis was simple. This man had been given an enema and the fluid returned clear. Pressure on his abdomen caused relief of the pain. Why? Because some of the gases that were making pressure were pushed through, and in thirty minutes with return of the pressure he had pain. You can have simple obstruction in which nothing goes through, or you can have strangulation, when the muscles react and you may have a rigid abdomen, and then you have a condition of thrombosis. The leukocyte counts are very deceiving. I recall one case in which the count was made and in three hours it shot up. The man's abdomen was opened and obstruction found. At the Fifth District Medical Society we had a paper by a man from New Orleans who reported a case in which there was every symptom of obstruction, in which he had given pituitrin and enemas and hot applications, and finally a gall stone was passed and the man got relief. He was 24 hours doing that. The patient could have died, but he was fortunate.

Dr. Maurice Gelpi (New Orleans): I do not know of a single surgical condition that requires keener surgical judgment than the determination as to whether or not an acute abdominal condition should be operated upon or left alone. The crux of the whole thing, as I see it, is this—that you *always* have time for the necessary

period of observation; you *always* have time to go over these cases first and see if you have a pneumonia; you always have time to take an X-Ray to see if you have stones; you *always* have time for the necessary laboratory work to assist you. If the patient is so desperately ill, that you do *not* have time for this ordinary surgery then the case is going to die anyway, whether you operate or not. That to me is the crux of the problem of acute abdominal conditions, when it comes to the matter of determining whether to operate or not.

As regards appendicitis, I think we should be careful not to misunderstand a few things that Doctor Herold has said. Once you have determined positively that you are dealing with acute appendicitis, there should be no compromise; it is a surgical condition, and as soon as circumstances are favorable for the extirpation of that appendix, you should remove it. The reason is that we never know for certain, what is going on inside the abdomen, and many times we take out these appendices through fear of what is *going* to happen, rather than on account of what has already happened. We operate at once because we are afraid *not* to do it.

Dr. A. A. Herold (Closing): I wish to thank the gentlemen for their kind discussion. I neglected to mention one thing, and that is of that extra abdominal condition of agina pectoris with abdominal symptoms.

I thank Doctor Lemann for his suggestions about diabetics. I had always thought it was safer to bring the blood sugar to normal so as to get rapid convalescence and healing of the wound; but I stand corrected on that—that it is safer to operate and treat the glycosuria afterwards.

Another point about cathartics came to my attention since writing this paper. A boy was brought in whose abdomen had been run over by an automobile. I ordered him put to bed, external heat applied, and morphine, but nothing by mouth. One of my colleagues came in, I told him about this case, and he said small doses of calomel would have done good!

As to Doctor Dimitry's question, I believe from my knowledge of the etiology of appendicitis that in a great many cases when you remove the appendix you remove the trouble; in other cases you have not. If it is due to focal infection or complicated with gall bladder disease, of course you have to go farther.

I especially wish to emphasize two things, one of which was mentioned by Doctor Bradburn and Doctor Gelpi, and that is that too many of us, surgeons and medical men alike, are sometimes hasty in diagnosis. And second, when in doubt, call a halt on purgatives in acute abdominal conditions.

## PRACTICAL FACTS CONCERNING EYES AND GENERAL PRACTICE\*

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I have been asked by the chairman of the Eye, Ear, Nose and Throat Section to prepare a paper, on the eye, for reading be-

\*Read before the Mississippi State Medical Association, Jackson, Miss., May 13-14, 1924.

fore this general session, of a nature which should be of interest to the members who are not making a specialty of this particular line. This request necessarily limits my paper to a general discussion, rather than detailed technical points, which would be of interest only to the Eye Specialist. Perhaps no specialty is so clear cut and exact as that of the Oculist, and yet there is so much to be said about the eye that one of our foremost Ophthalmologists in America, Dr. Casey Wood, of Chicago, has edited an Encyclopedia on the eye consisting of 18 volumes, with over 14,000 pages. But what concerns the general practitioner most, as I see it, are the minor troubles of the eyes which they have to handle at home and certain questions of diagnosis which may be important in determining when these patients should be referred to the specialist.

To know what is best to do for the eyes under different conditions requires an intimate knowledge of the Microscopic Anatomy, and also the Physiology of the eye.

As you know the cornea, or clear part of the eye, is made up of five layers, each different from the others. The epithelium covering reproduces itself well and quickly when injured from any cause, and usually without leaving any scars. But an injury, whether traumatic or degenerative, which penetrates Bowman's membrane, the second layer, destroys tissue which cannot regenerate itself and in the healing scar-tissue is formed, which leaves a permanent white spot, and this white spot, if centrally located, diminishes vision in proportion to its size and density. Thus we see the importance of keeping this second layer intact, whenever possible.

This brings up the question of foreign bodies, such as cinders, emery rock, pieces of steel, etc., which may be lying on or embedded in the cornea. To my mind the old habit of picking at these foreign bodies with the corner of a handkerchief, or with cotton applicators, should be discarded. The surface applied to the cornea is much greater than is necessary, and does damage to the epithelium over a much greater area than should be the case. And usually there is no regard for having these articles sterile. In an open wound on the skin one would not be so careless of infection, and yet on one of the most important organs of the body this is often not considered. These small foreign bodies, superficially placed, should be removed very carefully with a sharp pointed

instrument, after instilling one or two drops of a 4 per cent solution of cocaine in the eye. In this way no extra damage is done to the eye by the method of removal.

If the foreign body happened to be hot when it entered the cornea, after removal it will be noticed that the little cup from which it was detached has charred edges, which in substance is the equivalent of dead skin after a burn on other parts of the body. If these charred edges are curetted away, care being taken not to make the cup deeper, the healing time will be shortened, with less danger of infection and a subsequent scar.

After removal, except in cases of very easily detached foreign bodies, a mild antiseptic, such as argyrol, should be instilled and the eye closed with a bandage for several hours. Foreign bodies on the conjunctiva are usually more easily removed, and less dangerous, but even here it is a great comfort to the patient to have a little cocaine instilled in the eye before making the attempt at removal. Oftentimes a foreign body may be discovered by turning the upper lid, when otherwise it would be missed.

Slight cuts in the eye require careful study to determine whether they penetrate into the interior, and when there is any question at all the patient should be given the advantage of the doubt, and handled by someone who can make certain. Penetrating wounds in the cornea alone are not so dangerous as those further back in the white part of the eye, especially with regard to total blindness. This is contrary to popular feeling in the matter. Sympathetic blindness, of the opposite eye, is often due to what was regarded as an insignificant cut in the sclera of the injured eye.

Penetrating wounds in one part of the eye may require an entirely different line of treatment from that in some other part. Atropine may be indicated in one instance and absolutely contra-indicated in others, and this makes it especially important for careful study. If the iris should be pulled into the wound this requires distinct handling, an iridectomy.

There are perhaps as many varieties of ulcers of the cornea as there are ulcers of other parts of the body, and there are almost as many lines of treatment as there are ulcers. Some ulcers are very superficial, and clear up readily with treatment, but practically all have a potential danger, and many of them run a very rapid course

with destruction of the cornea. No ulcer of the cornea should be considered lightly.

In connection with the ulcers of the cornea, and persistent conjunctivitis, should be considered focal infections in other parts of the body. Many times these conditions are secondary to infections about the teeth and gums, and sinus troubles, or tonsils and cannot be controlled until the focal infections are dispensed with. Of course there are more serious conditions of the eyes also which follow in the wake of these infections, but with which only the oculist has to deal and need no discussion here.

Ordinarily infections of the eye such as pink-eye, or mild conjunctivitis, can often be treated with success with the silver preparations or zinc sulphate. Argyrol is one of the most popular eye medicines, and yet by some Oculists is regarded as a dangerous drug. It is dangerous because of its indiscriminate use. I have seen cases where argyrol has been prescribed for eyes and the patient had used it over a length of time and produced argyria, or permanent dark discoloration of the white of the eyes. I could name two cases in particular whose eyes are nearly as dark as argyrol itself, and permanently so which has been brought on by the use of this drug. It is a valuable drug in its proper place and used only in acute conditions for a short time, but dangerous in that it is used by some physicians for all inflammations of the eye, without an accurate diagnosis, when other treatment may be imperative if the eye is to be saved. I have seen patients almost blind with glaucoma and practically beyond the hope of relief, whose only treatment had been argyrol through a stage when time was extremely valuable, when eserine should have been used.

I have known other instances where the indiscriminate use of atropine has played havoc by being used in eyes that were glaucomatous. I shall not go into differential diagnosis here but simply wish to give a warning against the use of atropine in the eye until you are certain of your diagnosis and the indication. Atropine, with regard to the eyes is often one of the "cure or kill" drugs which should be used with utmost discretion. It should never be used when the tension of the eye is increased, when it feels tight. On the other hand, it is indicated for iritis.

Our profession can do a great deal in a preventive measure if they will keep clear-

ly in mind, and impress upon the patients, the difference between a pterygium and a cataract, and also the difference in treating the two conditions. It is common for the Laity to think of a pterygium being a cataract. We frequently have patients to write us stating that they have cataracts, and wish to know when they should be removed, and what it will cost. We never know whether they mean a pterygium or a real cataract. Of course a pterygium is a fleshy growth springing from the conjunctiva and projecting on the cornea in the form of a V, with the apex toward the pupil. Whereas a cataract is an opacity of the crystalline lens, or its capsule. A pterygium should be removed in its very beginning. The senile cataract only after it has ripened, so to speak. The Laity have heard always that a cataract must be ripe before its removal, and applying this to the pterygium, which they consider a cataract some take it to mean you must wait until the pterygium has reached the center of the cornea, or even covered it, before having it removed. And this erroneous idea has led many people to neglect this serious condition until the vision has been permanently impaired. It is common belief, that a pterygium does no harm until it has reached the margin of the pupil.

Almost in its beginning it alters the curvature of the cornea and produces astigmatism, sometimes to the extent that it cannot be corrected entirely with glasses. A thin film projects on the cornea in advance of the main growth and cannot be seen well with the unaided eye. If a pterygium is of slow growth, and has been on the eye quite a while, it attaches itself so firmly to the cornea that when it is removed it leaves some white scar tissue which is permanent. You are due it to your patients, who show this growth on the outer surface of the eye, to advise its removal without waiting for it to advance.

The time of removal for senile cataracts should be left to the discretion of an Oculist. However, with congenital cataracts in children, the family physician should advise operation as early in life as possible. In the very young, a simple needling will cause the cataract to become absorbed, while if left to go until a later age, absorption may be impossible, and removal in bulk become necessary, which is a more dangerous operation.

While thinking of age in connection with eye troubles in children, I wish to emphasize the importance of treating cross

eyes while the child is quite young. In the majority of these cases the cause can be traced to hyperopia, or relatively speaking a short eye ball, in which focusing for the near point is difficult, without considerable effort of accommodation. Glasses properly fitted at an early age will straighten the eyes in most children. The older they become the harder it is to accomplish this, and after the age of seven it is almost impossible to straighten the eyes with glasses, and the only recourse left is a muscle operation. And even when they are corrected with a muscle operation, after this age, the two eyes rarely work together. My point is, that all children with cross eyes should be carefully studied at a very early age, with the idea of correcting the condition with glasses, which perhaps cannot be done at a later age. These eyes must be examined under the influence of belladonna, and it is worse than useless to try fitting them with any other method.

I have no criticism to make of the Optometrists. Many of them are honorable, conscientious men who endeavor to do what they consider to be for the best of the eyes, and they can often accomplish good results with people beyond middle age. But they are not permitted to use drugs in any form and since it is essential for accuracy to use belladonna in the eyes of the young, whose accommodation is active, I feel like it is a great mistake for young people to wear glasses fitted by members of that profession. I have seen children wearing minus cylinders, axis 180, which checked up all right before using a mydriatic, and who after using a mydriatic, to relax the accommodation, would take plus cylinders in exactly the opposite axis or 90. In other words the Optometrist had corrected the astigmatism, which can be done either with minus or plus lenses, but by using this minus lens had increased the hyperopia which is almost as bad.

I cannot stress this point too strongly, that students should be examined only by Oculists with the aid of mydriatics. And yet it is a common occurrence that physicians are referring these cases, including their own children, to Optometrists for glasses.

Another condition which I think should be borne in mind is that headaches in children are in most instances due to errors in refraction. The fact that many of these children have keen vision is mis-

leading in this regard. One can have very keen vision sometimes with a high degree of hyperopia, or with mild astigmatism. A great effort on the part of the muscles of accommodation makes this possible. The fact that ones vision is keen must not mislead you into believing the eyes cannot be responsible for the headaches. I feel that in all school inspections every child should be questioned with regard to headaches. If headaches are frequent, the eyes should be thoroughly examined regardless of whether or not the child sees clearly. The majority of these cases can be relieved with the use of glasses. These glasses should be prescribed only after the use of a mydriatic in making the examination.

#### DISCUSSION

Dr. W. S. Sims (Jackson): The doctor has given us an excellent paper dealing with unquestioned facts that we can all appreciate, general practitioner as well as specialist, although I suppose the paper is intended more for the general practitioner. We have heard a great deal in the past about what the general practitioner should know about the eye, but we have heard little about what the eye man should know about general medicine. We have actually been neglected, and as we all know, eye affections are more often than not local manifestations of some general disease, as syphilis, tuberculosis, kidney trouble, or focal infections from the teeth, tonsils, prostate, cervix, and intestinal tract. These we should keep a close watch for and remove as far as possible when we learn their location.

The focal infections and toxic conditions seem to be confused by some. For instance, I had a patient some time ago referred to me with an iritis, with the request that I have a dentist see certain teeth and have them extracted, the doctor stating that he felt sure when he diseased teeth were extracted the eye would clear up. I agreed that the diseased teeth should be extracted, but I did not agree that the infection would be relieved at once when the teeth were extracted, because this was a secondary infection and was just as much a focus of infection as the primary. This iritis had to be treated through several weeks, and it was a mistake to say that the secondary infection would be relieved at once by removal of the primary cause. That is not true of toxic infection. Later I saw a patient with an infected ulcer of the cornea. It was a very virulent infection. At the time I saw him the anterior chamber was filled with non-infected pus (hypopyon). This latter was a good example of a toxic infection. The destruction of the infection of the corneal ulcer was

promptly followed by the relief of the iridocyclitis and hypopyon.

Dr. E. Leroy Wilkins (Clarksdale): I agree with Dr. Guyton that a good many of these cases seem to be neglected, but not so many as a few years ago.

I would like to mention one or two things—one is the question of using 4 per cent. cocaine. Abbott puts out a preparation called Butyn that we find an excellent help, more especially in the case of a man, say walking to his office, who gets a foreign body in his eye. If we put in 4 per cent cocaine we are apt to get dilatation of the pupil that hampers him in his work, and it also has a slight drying effect on the cornea. Butyn does not have the dilating effect, is better, and a lesser time is required for, anaesthesia. I believe since I have been using Butyn that my cases of foreign body in the eye, heal over quicker, have less pain and less bad after effects.

We all have the proposition the Doctor mentioned—that is, the lamentable fact that the misnomer of cataract is so well established. To the lay mind a pterygium looks like cataract, and it certainly works great harm in a number of cases—by the waiting for the so-called cataract to ripen to the point of no vision.

Speaking of headaches, I think the majority of headaches in children and young people are from the eyes, eye strain, but I feel it is wise in every case of a young person coming for headache to also look over the points of possible focal infections as a cause of eye conditions. We now find a possibility of a focal infection that might cause the headache, have that removed also, and best time before you go into the eye, and if there is before refacting.

Dr. D. C. Montgomery (Greenville): There is one point in the Doctor's paper that I want to mention particularly, and that is the focal infections that in the past caused many eyes to be lost. I had a young lady come to my office with a history that five days previously the vision of her right eye began to blur. Within five days she was unable to see anything more than fingers at two feet. A very careful examination, both with the ophthalmoscope and otherwise, failed to show any lesion whatever—eye grounds negative. Bearing in mind that focal infection could cause such a condition I examined carefully and found nothing, although I knew that a hyperplastic condition of the ethmoid or sphenoid may show no pus or mucus. The condition was such that it needed immediate attention or she would lose that eye, I decided to open the ethmoid and sphenoid cells—but did not find anything but a hyperplastic condition, no pus. She began to improve in about three days, and at the end of thirty days the vision was 20-20. In the meantime, two weeks after the first eye became infected the second eye did the same thing. I did the same operation on the opposite side and the condition stopped at once. That case showed absolutely no indication of any infection or trouble in the eye itself so far as I could see.

I will take exception to what Doctor Wilkins says about Butyn. I have tried Butyn and it has been my experience that it has not been of much value, in nose and throat work. I realize that a great many men are using it with success, but I believe that cocaine and novocaine will never be given up and will never lose its usefulness.

## A NEW OPERATION FOR THE CORRECTION OF SQUINT\*

ARTHUR WHITMIRE, M. D.,  
NEW ORLEANS.

Volumes have been written on Squint, commonly called "Crossed Eyes," for which many operations have been performed with both their good and bad modifications. I shall not attempt to go into the theory. My purpose is to present an operation which I have modified from Reese's Resection, adding a scleral suture for fixing the tenotomized end of the opposing rectus in a fashion enabling a suture to be placed at any accessible distance from the limbus—even directly over the "danger zone," which is in the vicinity of the Ciliary muscle. Until recently, this technique would have been considered quite dangerous, in that the sclera, being the thinness of paper, perfectly smooth and sometimes transparent to the extent that the choroidal pigment shows through. Here the greatest care is necessary in order that sufficient fibers are divided to hold a No. 3 silk thread, against the forward pressure of supra-orbital fat. Yet you do not dare perforate the sclera for fear of irritation of the ciliary muscle, and infection.

Previous to performing the operation four years ago, I had been unable to find this technique in the literature. In December, 1920, I presented two cases to the Eye, Ear, Nose and Throat Club of New Orleans.

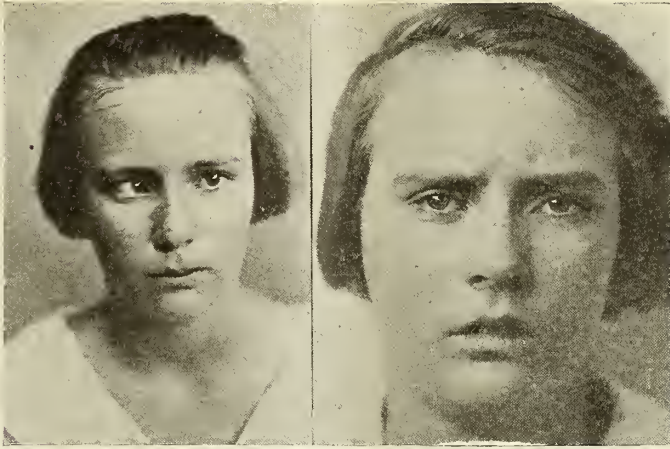
In May, 1923, I was permitted to have published in the Archives of Ophthalmology, a paper entitled "Fundamental Considerations in the Correction of Squint," in which I endeavored to cover the field more in detail than in this report.

Here I shall try to avoid that which is of little interest to the general practitioner, but to contribute, if possible, something to the ophthalmologists present, in the event sufficient time is permitted for discussion.

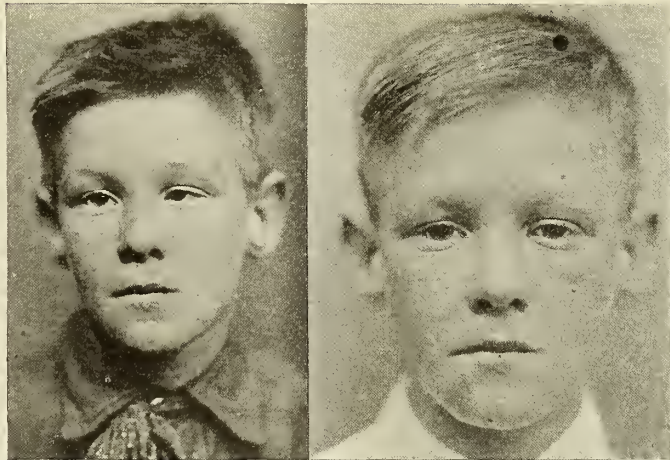
My series of about 50 cases, as far as I have been able to observe, have discarded glasses altogether following operation. To the casual observer, and in many cases Physicians have been unable to detect which eye had been operated unless quite familiar with the case. The cosmetic effect is striking. The thin patients gain from 10 to 15 lbs. within a few months, the little fellow takes a new hold

\*Read before the South Mississippi State Medical Society June 18, 1924.





Before and after Operation, 1920. Gained 15 pounds in four months. Right eye V 20/200, left eye V 20/20. Refractive error both eyes plus 5.50 sph.



Before and after operation, 1920. Gained 10 pounds in two months. Right eye V 20/100, left eye V 20/50. Refractive error both eyes plus 5.50 sph. Presented to Eye, Ear, Nose and Throat Club, Orleans Parish, Dec. 10, 1920



Before and after operation, 1921. Right eye V 10/200, left eye V 20/20. At time of operation was receiving .75 per night, one year later was earning \$200 per month.



Before and after operation. A few additional cases worthy of note where remarkable improvement has been noted. All of whom have discarded glasses entirely for all possible uses.

upon life and is transformed to a happy, normal child.

Many factors are to be taken into account in order to obtain the exact correction. This is best done by measurements of deviation, muscle strength, error of refraction, general physical condition and development of extrinsic muscles as observed only when exposed.

The cases of divergent strabismus often have a weakened, thinned and undeveloped internus and a hypertrophied externus. In the divergent cases only 6 eyes as yet have been operated. Resection of externus and tenotomy of internus is done.

My modification of Reese's resection is to pass a No. 10 silk suture into the muscle proximally to the Prince Forceps, but not until the tendon has been divided at the scleral attachment, just the opposite procedure to that of Reese, but causing the severed edges of both stump and muscle not only to come together but actually bend at right angles to plane of sclera with their cut ends pointing outward. Not one of the cases showing any tendency to slip or relax in the least from underneath the stump. Sutures are passed through conjunctiva and two mm from limbus and tied securely. The tenotomized muscle is held in Prince Forceps and a number three (3) silk suture passed through muscle proximally to forceps and into sclera from three to twelve mm from stump and brought out and tied over conjunctiva two mm from limbus. Done by the open method, it is necessary to close all conjunctiva openings with No. 3 silk. Anchor either to bridge of nose over several layers of adhesive, or strap over to temple as the case may justify. This anchorage is best obtained by passing a number 13 silk suture underneath the conjunctiva as close to limbus as possible. Pressure bandage over both eyes, changed every twenty-four hours for three consecutive days. Large scleral sutures should remain in position from twelve to thirty days owing to the amount of scar desirable at attachment.

Local anesthesia is used for all cases except the excitable type. The youngest operated in series under local was 6 years of age. No interruption on account of pain.

Conclusion—Glasses being discontinued without apparent defect in cases of hyperopia as great as 4 days is admittedly quite interesting to some of the country's great-

est ophthalmologists. This I attribute to the improvement in body strength.

This cosmetic result without the aid of glasses is a new feature.

DISCUSSION

Dr. Tracy: I would like to ask Dr. Whitmire if he has had the misfortune of having a knot slip following a resection. Also does he always cut the internus when performing a resection of the external rectus.

Dr. Whitmire, in closing: In my limited experience, doing this particular work, it has been my good luck to have not had a single slipping of the knot. This is due to the fact that the suture is tied before the forceps are removed, and is held at an angle sufficient to make slipping, in my opinion, practically impossible—there is not the slightest danger in any way attending this operation.

CRUDE STATISTICS\*

J. GEORGE DEMPSEY, M. D.,  
NEW ORLEANS.

In compliance with the request of our chairman, I have the pleasure of presenting to you the Statistical Records of the years 1922-1923, of Births and Deaths compiled by the Bureau of Vital Statistics.

*Births*

Number of Births received for the  
year 1923 .....41,074  
Number of Births received for the  
year 1922 .....40,011  
Showing an increase over 1922 of—1,063

No doubt this amount will be increased from time to time when delays are accounted for, and remote sections are thoroughly canvassed.

*Deaths*

Number of Deaths received for the  
year 1923 .....22,319  
Number of Deaths received for the  
year 1922 .....20,612  
Showing an increase over 1922 of.. 1,707

Whereas the total number of deaths for 1923 exceeded 1922 by 1,707 it shows clearly that we are getting better co-operation in all the Parishes.

*Louisiana*

	1922	1923
Estimated population	1,835,106	1,849,746
White population	1,136,660	1,152,680
Colored population	698,446	697,066
Total deaths	20,612	22,319
General death rate per 1,000 population	11.2	12.0

\*Read before the Louisiana State Medical Society, Opelousas, April 22-24, 1924.

1922 *Deaths*

White . . . .	10,616	Colored . .	9,996
Rate per		Rate per	
1000 pop..	9.3	1000 pop.	14.3

1923 *Deaths*

White . . . .	11,526	Colored . .	10,793
Rate per		Rate per	
1000 pop.	10.0	1000 pop.	15.5
		1922	1923
Total births . . . . .	40,011		41,074
General birth rate per			
1000 population . . . .	21.8		22.2

1922 *Births*

White . . . .	26,004	Colored . .	14,007
Rate per		Rate per	
1000 pop.	22.9	1000 pop.	20.0

1923 *Births*

White . . . .	26,270	Colored . .	14,804
Rate per		Rate per	
1000 pop.	22.8	1000 pop..	21.2
Your attention is especially called to the			

tabulation of Deaths from the most important cases in comparison with other cases during the years 1922 and 1923, see maps, also, to detailed report on map by all parishes for 1922 and 1923 of births and deaths and infantile mortality.

All rates in this report are based on total number of deaths occurring in each community irrespective of residence at time of death. It is but natural that there should be a greater rate in large cities and towns where sanitariums and hospitals exist.

In spite of the usual number of delayed certificates for 1923 due the departments you will find a considerable increase in births and deaths, over last year, which increase is mainly due to the better co-operation on the part of the rural registrars in forwarding their reports and certificates.

In conclusion I want to express my sincere thanks to the physicians and registrars, for without their assistance the accuracy of this report might be questioned.

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*VACCINES*

*SERA*

A cordial invitation is extended to visit our exhibit at the Southern Medical Association meeting at New Orleans, November 24-27, 1924

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New Orleans  
**Medical and Surgical Journal**

*Established 1844*

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**SUBSCRIPTION TERMS:** \$2.00 per year in advance, postage paid, for the United States; \$2.50 per year for all foreign countries belonging to the Postal Union.

Material for publication should be received not later than the twentieth of the month preceding publication. Orders for reprints must be sent in duplicate when returning galley proof.

THE JOURNAL does not hold itself responsible for statements made by any contributor.

Communications should be addressed to: *New Orleans Medical and Surgical Journal, 1551 Canal Street, New Orleans, La.*

**SOUTHERN MEDICAL ASSOCIATION**

New Orleans will this month be host to the Southern Medical Association. For the past year, the Orleans Parish Medical Society has been actively preparing for the entertainment of the second largest Medical Society in the United States.

Approximately ten years have elapsed since the convention met in New Orleans. This interval of years has been marked by a steady growth of the Association, until today it ranks among the highest in personnel and scientific attainment.

Their meetings have always been featured by a scientific program of the first order, and every effort has been made to surpass if possible all former programs.

Read it over and be convinced. All subjects thoroughly covered, and by leaders of medical thoughts!

Again, the Southern Medical has a reputation of staging a meeting of "warmth," where good fellowship and the bringing together on closer terms of intimacy medical men, is a feature that is most attractive,

especially in our day of "over-organization."

The columns of this Journal and the Southern Medical carry an invitation and a suggestion of what will transpire.

The General Committee, with Dr. Homer Dupuy as Chairman, is ready. Nothing has been overlooked that would help to make this convention a most memorable one.

Count yourself among those progressive medical men and spend four profitable days with us.

**BICKHAM'S OPERATIVE SURGERY**

The appearance of the first four volumes of Bickham's encyclopedic Treatise on Operative Surgery marks an event which is not only of special significance in the history of medical publishing in this country, but is of particular interest to the medical profession of this city where the distinguished author was born, educated and launched in his professional career. Dr. Bickham's participation for many years in the activities of the local profession and as a member of the staffs of our leading institutions,—Charity Hospital, Tulane University, Touro Infirmary, Presbyterian and Hotel Dieu—remains too fresh and agreeable in the memory of his numerous friends and former associates to allow the remarkable achievement which is represented by the four portly volumes that lie before us, to go by the editorial office without the JOURNAL'S notice, and the expression of gratification experienced by the Staff in the completion of a great undertaking which reflects so creditably upon the author and indirectly upon the community and the institutions that gave him birth.

It will no doubt interest the younger generation of medical men, and especially the Alumni of Tulane University, who have sprung up since Dr. Bickham transferred his domicile to New York, to know that he is a graduate of the Medical School of Tulane University (Class of 1887), and that he was the first demonstrator of Operative Surgery, appointed in 1893, to direct the Laboratory which had just been created through the bounty of Professor A. B. Miles, and since known as the Miles Laboratory of Operative Surgery. He was in charge of this Laboratory from April 17, 1893 to May 7, 1898, when, after the death of his father, Dr. C. J. Bickham, he resigned and was succeeded by his former assistant, Dr. H. B. Gessner, who continued in charge until the close of the

session 1922-23, to be succeeded, in turn, by the present incumbent, Dr. L. H. Landry, also a former assistant in the Laboratory.

It is worthy of note that Dr. C. J. Bickham, the father of the author, had been a demonstrator of Anatomy in the medical department of University of Louisiana (now Tulane) from May 20th, 1867, to May 24, 1872, for precisely the same number of years that the son subsequently served as Chief of the Laboratory of Operative Surgery.

It is not surprising that Dr. Bickham's predilection for Anatomy and his unusual capacity as a teacher should have been an inheritance from his father, of whom it may be said that, apart from his universally recognized ability, he was one of the gentlest and best loved men in the community. The name, Warren Stone, given to the son, also attests to the admiration and friendship in which the elder Bickham held that remarkable man and surgeon, a name that also links Dr. Bickham, the author of this great work, with one of the most famous and honored traditions in the surgical history of New Orleans.

On resigning from the directorship of the laboratory of operative surgery, Dr. Warren Stone Bickham gave up a very lucrative practice to pursue under the great European masters of his time, the study of surgery, which had become his ruling passion. After several years of arduous and unremitting study spent in England and the continent, he returned to America and established himself in New York, where he was soon appointed Surgeon on the Staff of the Manhattan Hospital and Instructor in Operative Surgery at the College of Physicians and Surgeons (Columbia University), the New York Post Graduate School and Hospital, and the New York Polyclinic School. In the midst of these occupations, he found time to devote himself to medical authorship, which found expression in the first edition of his well known "Text Book on Operative Surgery," published by Saunders in 1903. This quickly ran through a second and third edition in 1904 and 1908 respectively. This, then, was the foundation upon which the present exhaustive treatise was built. Business interests again brought Dr. Bickham to New Orleans. In that year, the official staff of Touro Infirmary was reorganized with Dr. Matas as Chief of the Surgical Division and Dr. Bickham was appointed senior assistant surgeon, and was also associated with Dr. Matas in his private practice. While

busily engaged in this work, he constantly kept in view the preparation of a fourth edition of his text book, and it was while collecting and accumulating material for this work that the idea of expanding the text book into the present encyclopedic treatise originated, and from this time on, the realization of this project became his dominant idea.

On his return to New York in 1909, he gave himself whole-heartedly to the work that he had laid before him, and now, after ten years of constant, systematic and self-sacrificing toil, interrupted only by the exigencies of practice, he has come to the termination of his gigantic enterprise.

To the intimate friends of Dr. Bickham, there is nothing surprising in this remarkable achievement. To those who are familiar with his splendid ability and long training as a teacher of operative surgery, with his indomitable will, his steadfastness of purpose, his thoroughness, untiring industry and extraordinary capacity for disciplined, methodical and continued work, the successful attainment of a goal, inaccessible to most men, is a perfectly natural achievement which must endure as a testimonial to the truth of the old adage,—*labor omnia vincit*—especially, as in this case, when the task itself is not only a pleasure but becomes an absorbing passion.

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#### THE DUCROS BILL

At the last session of the Louisiana Legislature there was passed the Ducros Bill, a law requiring a physical examination of the male before marriage, and a certificate that the applicant is free from venereal disease. In regard to this Bill, the medical profession we are sure, agrees that the Legislature has enacted a law which will go far towards making marriage a less hazardous affair, and which will ensure better health for the progeny.

Because of the numerous inquiries that have been received by the Editor regarding this bill, known as Act. No. 164, it has been considered wise to apprise the profession of the state, in a brief manner, as regards the interpretation of the Act as it applies to the profession. Especially, does it seem pertinent, that we have a clear understanding as to just what type or types of examination are demanded by the Act.

Medical examination as a condition precedent to the application of males for a license to marry can be classed under two heads: viz, those that deny previous venereal disease and those that admit exposure

to these infections. Obviously, in the case of those with negative history, and where physicians can personally avow the patient's integrity, but a cursory examination would be expected. On the other hand, where the applicant admits having had, at some previous date, one or more of the venereal diseases, a most circumspect clinical and laboratory investigation is demanded. Relative to the number of examinations necessary, as well as the various kinds of investigations indicated, in venereally infected applicants, the Act fails to specify. This is where many of our readers are in a quandary. That some outline for the practitioner becomes necessary needs no argument. Through the joint efforts of the Louisiana State Medical Society and the Orleans Parish Medical Society a committee was appointed to confer with the Editor in an effort to place before the profession, in as terse and lucid a manner as possible, a gist of what is to comprise a satisfactory examination as required in the Act.

Under a clinical study must be considered, a history of the case, a physical examination of the skin, glands, reflexes, etc. Visual examination would include, (1) the urine (class tests), (2) uréthra (for discharge, palpable glands, stricture, etc.), and (3) the prostrate gland and seminal vesicles, (digital examination per rectum, as to size, consistency, etc.). Preferably a morning specimen of urine, studied microscopically for pus and bacteria (centrifugal specimen). If urethral smear is obtained, subject same to Gram stain.

In cases giving positive histories, no investigation can be considered to any degree thorough unless patient has been seen three separate times, at five-day intervals (upon each visit being subjected to the above routine). If Wassermann test seems indicated, it must remain to the judgment of the clinician, as to whether it is to be only an examination of blood, or of both, blood and spinal fluid.

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#### OBSERVATION

It is only by observation and the application of reason thereto that we make real advances in science and in knowledge generally. The story of Newton's discovery or, rather, his observation and his enunciation of the law of gravitation is too well known to justify reciting here.

Much of our medical knowledge is the result of rational application of information gathered from observation; progress

in methods of examination certainly originates in this way. Laennec's introduction of the stethoscope resulted from his observation of boys in the Louvre Garden of Paris tapping logs of wood at one end while others kept their ears to the opposite ends; Auenbrugger's ideas about percussion of the chest originated from seeing his father, an inn-keeper, tap kegs to find out the level of the wines. By observing the effects of drugs and other preparations on animals and by proper deductions therefrom have come many of our most useful remedies today, e. g.: arsphenamin, epinephrin, thyroid and pituitary extracts, insulin, etc. Proper deductions from observations of and on mosquitoes have helped to rid civilized countries of much malaria and yellow fever; likewise, ticks and Rocky Mountain fever, rats and plague, and so on.

It is hoped and believed that only by further and closer observation and by the application of knowledge thus obtained will the great problems of "the cancers" be ultimately solved.

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#### SPEAKING OF AUTOPSIES.

The examination of the body in fatal cases of disease or injury is being stressed more and more, especially in hospitals. Indeed the proportion of autopsies to fatalities is one of the factors in grading a modern hospital.

When we consider the value of such examinations in determining the relation of symptomatology to pathology, in other words checking up diagnosis, and in checking up the influence of surgical intervention, on the outcome of a case, it will be seen readily that the value of the necropsy is very great. Abundance of autopsy material is thought to have contributed materially to the eminence of Vienna as a medical center.

If the ideal could be obtained of an autopsy for every death, many painful lessons would be learned by the profession, much good would result. In order to approach this ideal of practice, we medical men must learn to present the request in a manner efficient and tactful. It is said that in a well-known clinic the word examination is used, not that employed in our title. Stress must be laid on the benefit to humanity at large, as well as on the possible immediate reaction on the welfare of the family and on that of the individual whose consent is at stake. A friend suggests that the post-mortem examination

should be tendered as a service to which the family is entitled.

In order to achieve success we must bring to bear in our favor every agency that promises to be of assistance. Important in this connection is the co-operation of the morticians. A thorough investigation of this side of the question by a committee of the New Orleans Charity Hospital Visiting Staff has shown that there are inconveniences experienced by the morticians in this institution calculated to alienate their support and tempt them to minimize the number of autopsies in their clientele. Delays necessitating loss of employes' time, and technique which makes embalming difficult and unsatisfactory, are mentioned in this connection. Elimination of these institutional faults should be affected and steps taken to see that those who co-operate do not find virtue their only reward. Embalming before autopsy has been suggested as a helpful measure.

The suggestion occurs to us that physicians may promote an increased ratio of autopsies by familiarizing the public with such examinations in their own persons. If medical men in general were to instruct their families to have them autopsied, if they would favor autopsies in their own relatives, familiarity with such procedures would lessen the horror inspired by the thought in the laity. Responsible members of the family, when approached on the subject, could be reminded that medical acquaintances of theirs had requested this service in the event of their own decease, or had secured it for their own kindred.

"Practice what you preach" is a piece of advice not lightly to be rejected.

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#### THIS IS CO-OPERATION.

Trachoma is defined by the Federal statutes as a dangerous, loathsome contagious disease. Heavy penalties are imposed upon persons, firms or corporations which bring

to the United States persons suffering with trachoma. It is, therefore, of the utmost importance that ship surgeons maintain the highest degree of alertness in examining prospective passengers whose destination is the United States. To successfully accomplish the prevention of the embarkation of trachomatous persons, ships' surgeons must be able to accurately diagnose the disease. This is not difficult in frank cases, but there are many borderline conditions which may be very puzzling to the uninitiated. To the average practicing physician (the group from which ship's surgeons are drawn) trachoma is the unusual; to him its differential diagnosis is fraught with many perplexities.

In order to assist ship's surgeons in acquiring familiarity with the disease, a plan has been put in force by the U. S. Marine Hospital at New Orleans, Louisiana, whereby any ship surgeon visiting this port may receive a thorough clinical demonstration of several cases of trachoma. They may visit the Marine Hospital any afternoon, except Saturday, for this purpose, and since there are always several cases of trachoma here, a good clinical demonstration is always to be had.

This is a form of public health co-operation which affords an additional safeguard to the health of the nation and at the same time is helpful to shipping agency and immigrant alike.

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#### PHYSICIANS' HOME

As a matter of interest to those interested in the problem of a home for aged and infirm physicians, we would call attention to the article by Dr. Robert T. Morris in the September number of "Medical Economics;" he refers to the good work being done in Western New York by the Physician's Home, established through the generosity of a doctor of Olean, N. Y.

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NEW ORLEANS, U.S.A.



# SOUTHERN MEDICAL CONVENTION

About two weeks more. Are you all set? Of course you are. Things are a little slack now anyway. Just the thing we need, a week off before we begin the winter round of toil and more toil. Let's all go to New Orleans and freshen up. Big meeting, live papers, clinics every day, entertainment all the time. Boy, pack up, what's the use of staying home.

Remember we're boys only once, although men all the time. Take both to the Convention, the boy and the man in you. Let the man part attend to the sober business of the Convention, and turn the boy part loose, he'll take care of himself. Tell him first not to play with the naughty bootleggers. While the boy part is getting all fussed up and having the time of his young life, the man part, the boy's excess baggage, will be very busy with the following very vital and interesting program:

## Schedule for Scientific Work

Southern Medical Association, New Orleans, La.  
Monday, Tuesday, Wednesday and Thursday  
November 24-27.

- Section on Medicine—  
Afternoons—Monday, Tuesday, Wednesday.
- Section on Pediatrics—  
Forenoons—Tuesday, Wednesday, Thursday.
- Section on Neurology and Psychiatry—  
Forenoons—Tuesday and Wednesday.
- Southern Gastro-Enterological Ass'n.—  
Forenoons—Tuesday and Wednesday.
- Section on Pathology—  
Forenoons—Tuesday and Thursday.  
Afternoon—Wednesday.
- Section on Radiology—  
Afternoons—Monday and Tuesday.
- Section on Dermatology and Syphilology—  
Monday afternoon.
- Section on Surgery—  
Forenoons—Tuesday, Wednesday, Thursday.
- Sou. States Ass'n. of Railway Surgeons—  
Afternoons—Monday and Tuesday.
- Section on Urology—  
Afternoons—Tuesday and Wednesday.
- Section on Bone and Joint Surgery —  
Afternoons—Tuesday and Wednesday.
- Section on Obstetrics—  
Afternoons—Tuesday and Wednesday.
- Section on Eye, Ear, Nose and Throat—  
Forenoons—Tuesday, Wednesday, Thursday.
- Section on Public Health—  
Forenoons—Tuesday, Wednesday, Thursday.
- National Malaria Committee—  
Monday afternoon.
- Conference on Medical Education—  
Monday afternoon (tentative).
- Conference of Presidents and Secretaries of State  
Medical Associations and State Health Officers—  
Dinner Meeting—6:30, Tuesday.
- Women Physicians of Southern Medical Association,  
Tuesday, 5:00 p.m., followed by their usual dinner.
- First General Session (Public)—Addresses of  
Welcome, President's Address and Orations—  
Monday night, 8:00 o'clock.
- Last General Session and Symposium—(Report  
of Council, Election of Officers, etc., fol-  
lowed by a Symposium)—Thursday after-  
noon.

Meeting Conjointly with Southern Medical Association—

Southern Association of Anesthetists—Monday, Tuesday and Wednesday.

Conference of Southern States Statisticians—Monday afternoon.

Conference of Malaria Field Workers—Tuesday and Wednesday, forenoons and afternoons.

Presbyterian Physicians Missionary Movement—Tuesday, 6:30 p.m. (tentative).

In order that the women physicians attending the Southern Medical Association may become acquainted, a get-together meeting is arranged each year.



DR. CHARLES L. MINOR  
Asheville, N. C.

President Southern Medical Association.

The Tenth Annual Meeting will be held Tuesday evening, November 25th, at 6:30 o'clock, in the Patio Royal, 417 Royal Street. The meeting will be followed by the annual banquet in the large dining room of the Patio at 7:00 o'clock. Besides the usual toasts, a musical treat will be furnished by the Newcomb Mandolin and Glee Club. The Club is composed of twenty energetic and ambitious Newcomb girls, full of "pep and spirit."

There will be ample time after the meeting and banquet for the guests to attend the President's Reception at the Athenaeum the same evening.

The committee hopes that all local and visiting women physicians will attend both the meeting

and the banquet. Reservations for the banquet can be made through Dr. Margaret P. H. Bowden, Charity Hospital, New Orleans.

Up to the present date, October 22, 1924, the Committee on Scientific Exhibits of the Southern Medical Association has listed the following scientific exhibits:

Scheppegrell and Thiberge—Hayfever and Asthma.

Chas. J. Bloom—Pediatrics.

Graves—Blastomycosis.

Perret—Radium applicators.

Nix—Calculi and lantern slides.

Gaudet—Pathologic specimens.

Moursund (Baylor University College of Medicine)—Anatomy and Pathology.

Hoge—Pathology.

O. O. Jones—X-ray pictures.

Bloodgood—Bone exhibit.

Terry—Pathological technic and specimens.

Duke—Protein sensitization and allergy.

Noguchi—Yellow fever in experimental animals.

Iturbe—Trypanosomiasis and Schistosomiasis.

Matas—Abdominal aneurysms.

Dept. of Pathology, Tulane (Drs. Duval, Couret, Harris and Lanford)—Leprosy, Rat bite fever, Periarthritis nodosa, Dengue, Oxyuris Appendicitis, Avian tuberculosis, Blastomycosis.

Dept. of Medicine, Tulane (Drs. Lemann, Lyons, Jamison and Hobson)—Multiple stethophone, with daily (4-6 P. M.) demonstrations. Tickets must be secured, as the machine only accommodates 100. *Bring your stethoscope.*

Couret—Rabies.

Dempsey—Vital statistics.

Granger—X-ray of mastoid region.

DeBuys—Reverse peristalsis.

Charity Hospital—X-ray exhibit.

Louisiana State Board of Health.

Board of Health of the City of New Orleans.

Silverman and Menville—X-ray demonstration of gall bladder pathology.

Gondolf—An actinomyceete from a case of mycetoma.

Clinics will be held at Charity Hospital, Touro Infirmary and Hotel Dieu. During the Convention morning clinics are to be held in order not to interfere with the sessions, and after the Convention clinics will be held daily for those members desiring to remain.

New Orleans anticipates a banner meeting, both from the scientific standpoint and that of attendance, so that, unless you have made your reservation, you had better do it now.

Something is brewing along entertainment lines. The ladies' entertainment committee, with its weekly meetings, is undoubtedly expending energy which will bear fruition. As an unassuming scribe methinks that "Vieux Carre," automobile ride, boat ride, tea, etc., certainly indicate strength and effort along lines of entertainment. "Quien sabe."

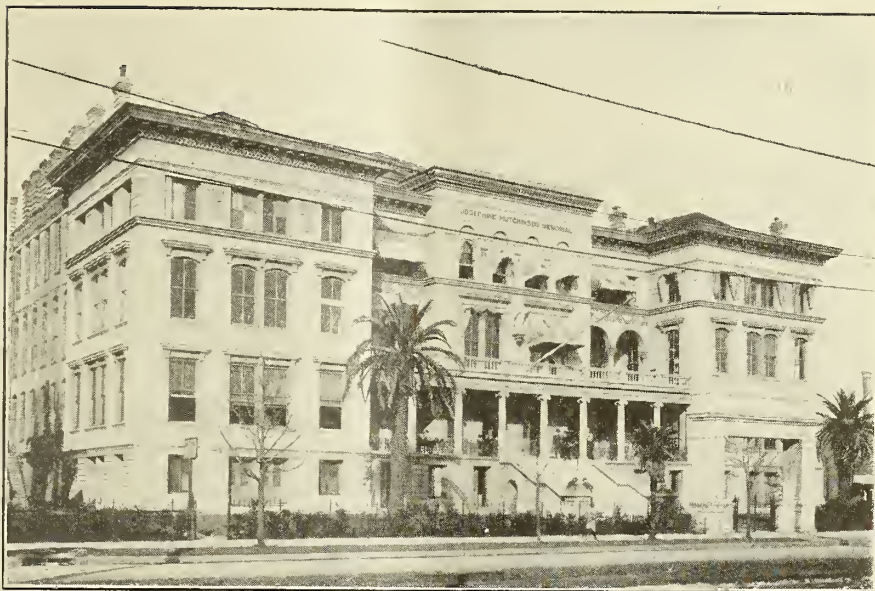
Of course the fact that the general chairman of the entertainment committee is redolent of the odor of coffee and doughnuts whenever he is in our neighborhood, leads me to suspect that he has an ace up his sleeve,—wouldn't be surprised if he made the inaugural ball reminiscent of the old French Market, when coffee for two meant that another honor had been upheld by the route of the "code duello." Chairmen are queer birds, again I say "Quien sabe."

Just twixt us, both chairman, ladies and men committee of entertainment, are live wires, and the committees themselves are crowded with the leaders of Southern Hospitality, so you'll make no mistake in being sure that your reservation is made in advance. Believe me.

Concomitant with,—did you hear that? Concomitant with the vital matters of medical interest, we are lining up for the equally important matter of "golluf." Bring your clubs, oil 'em, limber 'em up, because you're sure enough going to need 'em. The committee has lined up the finest string of turf destroyers in the history of medicine, and it looks to me to be a case of "lay on McDuff." "Tournaments to be announced later." Sounds like an auctioneer, now doesn't it? I'll leave it to you. Just like that, cold and formal.



ELKS' HOME  
Meeting Place for Sections on Medicine, Pediatrics and Pathology



HUTCHINSON MEMORIAL  
Meeting Place for Sections on Radiology and Ophthalmology

"Tournaments to be announced later." Watch 'em boys. They're up to something. Cups? Yes. But don't take my word for it. Come and see for yourself.

Incidentally New Orleans puts on her winter clothes about this time, and, having put her early raiments of suppers, theatres, balls, golf, teas, hunting, she tops it all with her overcoat of winter racing, which, by the way, starts on November 27th, the last day of the convention. Now some do and some don't go to the races. It's a matter of choice "degustibus non est discutantur," and all of that.

The information is handed to you for what it is worth, but, confidentially speaking, don't let the boy part of you find it out.

#### SOUTHERN MEDICAL ASSOCIATION SPECIAL NOTICE

The wives and daughters of Orleans Parish Medical Society members are asked to be present at as many as possible of the social functions to be given during the Southern Medical Association Convention, November 24th to 27th, so as to assist the Ladies' Committee in their function as hostesses.

#### COMMITTEE ON ARRANGEMENTS.

Kindly let us use your auto for the Southern Medical Meeting. Phone Main 1514.

### MEDICAL ECONOMICS

*Chas. A. Bahn, M.D., Department Editor.*

#### IV.

What you probably want to know about life insurance is how much you should profitably carry, what kind is best adapted to your needs and about what you have a right to expect in return for that part of your perfectly good savings thus invested.

The amount of insurance that is best suited for your needs and pocketbook can be arrived at in several different ways, all of which practically end in the same result, thus forming more or less of a check on each other. Based upon the estimates accepted in most compensation laws, the value of a life is approximately three to four times the individual's net yearly income; thus if you are earning ten thousand dollars a year net, you are entitled to carry between thirty and forty thousand dollars of life insurance. Another way is based on a budget plan of your income similar to that published in this department two months ago, in which you invest a certain amount of your income in insurance, buying the amount and kind of insurance that this part of your budget can most profitably purchase. If you are earning ten thousand dollars a year

net you should invest about nine hundred in life insurance, which, at the age of forty, will purchase about thirty thousand of the straight life plan. The third way is to carry an amount of insurance about equivalent to your savings program from increasing age, etc., on the principle that your life insurance will provide for yourself and family in case of premature disability or death, just as your other savings program will provide for yourself and family in disability from increasing age. Thus if you estimate that your savings will be fifty thousand dollars when you are fifty-five years of age, which will net you at five and a half per cent, approximately three thousand dollars per year; you should carry about forty thousand dollars of life insurance, because, after death, you will practically cease to be an expense and in case of productive survival, your insurance will augment your other savings program.

Under ordinary conditions it is neither practical nor desirable that a physician try to carry sufficient insurance, the income from which would equal his net earnings during his most productive years. Thus a net yearly income of ten thousand dollars would necessitate approxi-

mately one hundred and eighty thousand dollars worth of insurance at five and a half per cent in order to net ten thousand dollars yearly, that would cost at the age of forty, about fifty-four hundred dollars, depending upon the kind of insurance.

Life insurance is, of course, based upon the estimate, at a given age, of life expectancy in a reasonably healthy human not exposed to extraordinary risks. To this risk add about fifteen to twenty-five per cent overhead cost of management, etc., and you will have the basic rate charge for insurance. The insurance company has the use of your money usually for many years, which, of course, it reinvests productively. This simplest form of insurance is called term insurance, and is the kind that was issued during the war by the government. The insured pays a certain amount monthly, gradually increasing with age and in case of death before sixty-two, the amount of the policy is paid to beneficiaries. This insurance ceases at the age of sixty-two and has no loan value.

The next type is the straight life policy, in which the insured pays theoretically as long as he lives receiving, however, a certain dividend on the invested part of the premiums, which practically means that if begun at the age of forty and premiums are paid for twenty years, the policy will remain in force without further payment for about twelve years. The insured can borrow on this policy to a certain extent at a comparatively low interest rate, and can surrender it for a fixed amount.

Next we have the fifteen and twenty-year pay policies, in which the premiums are increased, likewise the loan and cash surrender values.

We have the endowment type, in which the premium is still higher, the surrender value greater and the loan value greater.

The main reason that these different types are mentioned is to bring out the fact that in life insurance there are two varying factors depending upon the type of policy. One is the basic risk on life expectancy, on which a fixed charge is made, and the other is an additional investment feature, in which the policy holder pays an additional sum in one form or another, and on which he receives a return usually of between two and a half and four per cent. Thus the form of insurance that you should carry will depend upon whether or not you can and will exclusive of life insurance, save the difference between the term insurance cost and the higher priced forms; and that you will positively always realize more than four per cent net upon your investment. If you cannot meet these requirements, life insurance is a good and safe investment for you aside from the protection given your dependants though with a rather low interest rate. If you can and will save the proper amount, investing it safely at a greater return, there is no reason why you should accept the rather low rate which life insurance companies pay for the invested amount of your savings.

The cheaper forms of life insurance such as straight life, are apparently best adapted for the more mature and experienced, both in age and savings ability, that is, those who will positively save and who will profitably and safely invest their savings, and who carry life insurance practically only for use in case of premature death. The more expensive forms such as the fifteen and twenty-year pay and endowment types are best adapted for the less experienced who are thus required to save more of their income and who prefer the low rate of two and a half to four per cent with safety to

a higher rate with the effort and risk necessary to make savings earn more.

I have a friend of about forty years of age carrying about forty thousand dollars worth of life insurance of varying kinds purchased over the last fifteen years, who took out another forty thousand dollars worth of straight life insurance, the cheapest practical form, cancelled the first forty thousand dollars worth, and invested the money received therefrom at 6 per cent interest. He thus carries forty thousand dollars worth of life insurance at about one-half the previous cost. He expects to continue this cheaper insurance until he is about sixty-two years of age, when he will cease paying the premiums. The insurance will remain in force without further payments for over twelve years more and then automatically expire. A change of insurance policy from a more expensive to a cheaper form, as illustrated in this instance, can usually be best accomplished through the company who issued the original insurance.

Generally speaking it is advisable that insurance be made payable directly to a beneficiary, rather than to one's estate, because in the latter case an inheritance tax will have to be paid upon the entire amount to the Federal Government if the estate is in excess of fifty thousand dollars, and also to the state less five thousand dollars each to wife or children. Should you desire your life insurance distributed in some definite way to prevent its loss by your beneficiaries, this can be accomplished either by a trust agreement, which I have been told is binding in this state only for ten years in the case of adults, and the same period after minors have become of age; and by a written agreement with the insurance company, which is apparently binding indefinitely. I have been informed that insurance companies pay four and a half per cent annual interest on funds thus entrusted to them.

Life insurance made payable to one's beneficiaries is exempt from federal inheritance tax under forty thousand dollars, and is entirely exempt from a state inheritance tax.

Health, accident and income insurance are forms of protection which possibly justify themselves especially to physicians because income is usually solely derived from personal service. Cheap to the poorer working classes. In several cases which have come under my observation the sick or injured have apparently not gotten a square deal. I do not know how closely these companies are regulated by law, but I do believe that the relation of the total amount paid in by the insured as compared to that paid back to the injured, sick, etc., in some of these companies, would make a forms of this kind of insurance are usually sold rather striking contrast.

We are indebted to Mr. R. F. Walker and F. S. Whitten, who have reviewed this month's contribution and offered suggestions

During the past several months, we have taken up in a simple way a profitable distribution of income, home ownership and life insurance. It is now perhaps desirable that we consider a few of the underlying principles of physicians' records, professional and financial, which will be discussed next month.

Again we say that we will appreciate more evidence of interest from readers: We don't care about bouquets, but we do invite criticism, preferably constructive. It is hard to know without expression of opinion, whether or not we are successful.

Address communications to Dr. Chas. A. Bahn, 1551 Canal St.

## NEWS AND COMMENT

*Lucien A. Ledoux, M. D., Department Editor*

"Every man owes some of his time to the up-building of the profession to which he belongs."

—Theodore Roosevelt.

Better set aside four days in November, and come to New Orleans for the Southern Medical Convention. Hotel accommodations plentiful, weather at its best, hundreds of diversifying places of interest and amusement. All that a great Metropolis can offer, and then the finest and largest Southern Medical ever held.

### MONTHLY BULLETIN OF THE SHREVEPORT MEDICAL SOCIETY, OCTOBER, 1924

October scientific Program. Neuropsychiatry, in charge of Dr. J. D. Young.

November Scientific Program. Reconstruction of Ankylosed Joints. Illustrated with motion pictures. Dr. W. C. Campbell, Memphis, Tenn. To open discussion, Drs. Guy A. Caldwell and H. A. Durham.

December Program. Election of Officers. No scientific program.

Charity Hospital, September 2nd, 1924.

The Shreveport Medical Society was called to orders at 8:10 P. M. by President Butler. Twenty-four members were present.

The committee on the application of Dr. J. W. Winn reported favorably.

The scientific part of the program was in charge of Dr. I. Henry Smith. The following papers were read: Ocular Headaches, by Dr. R. C. Young. Headaches of Nasal Origin, by Dr. L. W. Gorton. Aural Headaches, by Dr. I. Henry Smith. Discussion by Drs. J. D. Young, Cassity, Barrow, Crow, Boyce. Closing by Drs. Young, Gorton and Smith.

The written application for membership of Dr. L. W. Gorton and N. G. Nasif was read and referred to a committee. Dr. Nasif being a member of the Louisiana State Medical Society, Dr. Rigby made a motion which was seconded and passed that Dr. Nasif be accepted as a member of this Society.

#### New Business:

Dr. Heath requested that physicians use the services of the Board of Health and announced the future publication of a bulletin by the Board of Health advocating periodic health examinations in an effort to reduce the mortality rate.

Dr. Sentell made a motion that the rules be suspended and that the application of membership of Dr. V. Simmons be voted upon. The motion was seconded but failed to pass. Dr. Simmons' application was read and referred to a committee composed of Drs. Sentell, I. H. Smith and Cassity.

A motion was made, seconded and passed that Dr. D. A. Mohler be recommended as worthy of reciprocity with any state.

ROBT. T. LUCAS, Secretary-Treasurer.

### SEVENTH DISTRICT MEDICAL SOCIETY

The Seventh District Medical Society met at the Majestic Hotel, Lake Charles, Louisiana, on Thursday, September 25, 7:30 p.m., with a large attendance. President Moody and Secretary

Young officiated. After a delightful repast, the following papers were read: Dr. L. L. Cazeneuve, New Orleans, "The Systematic Neurologic Examination of Patients." Dr. Hermann B. Gessner, New Orleans, "The End Results of Traumatic Surgery." Dr. George Kreeger, Lake Charles, "Ethylene Anesthesia." Dr. W. H. Seemann addressed the society on the lines and purposes of the Louisiana Tuberculosis and Public Health Association. President C. V. Unsworth, of the Louisiana State Medical Society, was in attendance and took part in the discussions of the Society.

### SIXTH DISTRICT MEDICAL SOCIETY

The meeting of the Sixth District Medical Society at Baton Rouge on October 15th was probably the best attended in the history of the organization, with 100 doctors present when the meeting was called to order by President Dr. R. P. Jones.

The address of welcome was delivered by Dr. Lester J. Williams, followed by Dr. S. K. Simon, who read a splendid paper on the Duodenal Tube. Common Disorders of the Heart Met with in General Practice was ably presented by Dr. C. L. Eshleman, with Dr. Paul McIlhenny closing the scientific program with an essay on Infantile Paralysis.

Col. I. D. Wall delivered the annual oration on the Relation of the Law to Medicine.

As a tribute to the honored guests, the Society elected to Honorary Membership Dr. Chas. V. Unsworth, Dr. J. A. O'Hara, Dr. W. H. Dalrymple, Dr. S. K. Simon, Dr. C. L. Eshleman, Dr. Paul McIlhenny and Col. I. D. Wall.

The meeting was held at Our Lady of the Lake Sanitarium, the magnificent hospital erected by the Franciscan Sisters on University Lake.

The laboratories of the institution were inspected by the visiting doctors, after which dinner was served in the hospital by the student nurses.

### ST. TAMMANY PARISH MEDICAL SOCIETY

After recessing during the summer months, the St. Tammany Parish Medical Society resumed its regular sessions by holding its regular monthly meeting on Friday, October 10th, at the Southern Hotel, Covington.

Dr. T. B. Sellers, of New Orleans, read a very interesting and instructive paper on "Carcinoma of the Cervix." It was very freely discussed, and thoroughly appreciated. In addition, Dr. Sellers made several valuable suggestions as to the "Use and Abuse of Pituitrin." At the conclusion of the scientific session, Dr. Sellers was tendered a vote of thanks and elected an Honorary member of the Society.

At the Executive Session, Dr. G. McG. Stewart, of the East and West Feliciana Medical Society, who is now located in Covington, was elected a member by transfer.

Suitable resolutions of condolence were ordered drawn on the recent death of Dr. P. L. Cusachs, of Mandeville, who died recently in New Orleans.

The next meeting of the Society will be held in Slidell on Friday, November 14th, next.

Attending the meeting were Dr. J. K. Griffith, President; Dr. F. R. Singleton, Secretary-Treasurer; and Drs. Geo. Pennington, H. E. Gautreaux, J. F. Buquoi, H. D. Bulloch, G. McG. Stewart and A. G. Maylie.

#### HOMOCHITTO VALLEY MEDICAL ASSOCIATION

A free clinic was held at the Natchez Hospital under the auspices of the Homochitto Valley Medical Association, October 7th, 1924. Dr. Willis Campbell, noted specialist in bone surgery, in charge.

The facilities of the Natchez Hospital Clinic were arranged by Dr. J. C. McNair, Superintendent. This clinic was largely attended, not only by the Natchez physicians and surgeons, but from neighboring counties and parishes, including the following: Drs. Wharton, of Willetts; Dr. Clark, of Lorman; Dr. Ratcliff, of McComb; Dr. Dickinson, of McComb; Dr. Butler, of Liberty; Dr. Magoun, of Vidalia; Dr. Walker, of Bude; Dr. Whitaker, of St. Joseph; Dr. Smith, of Jonesville; Dr. Everett, of Bude; Dr. Mullens, of Bude; Dr. McGee, of Fayette; Dr. Townes, of Union Church, and Dr. Pope, of Centreville.

Many of the doctors brought patients that have been under their treatment to the clinic for diagnosis by Dr. Campbell. A majority of the patients were children, although a number were adults.

Following the clinic at the Hospital, the members of the Homochitto Valley Medical Society had lunch at White's with Dr. Campbell as the guest of honor, and after this he gave a brief lecture at the Baker Grand Theatre.

More than 100 physicians and surgeons of New York have combined to relieve the lack of hospital accommodation for private patients, and as a result Hudson Towers hospital-hotel is now nearing completion, and will be opened early next year, representing a capital investment of \$3,500,000.

Two delicate tonsillectomy operations performed in an emergency under the illumination of an ordinary pocket flashlight were recent illustrations of the ingenuity of modern surgery as demonstrated at the Phoenixville Hospital, Phoenixville, Pa., by one of the staff surgeons.

Those responsible for goiter surveys made in universities are now presenting some interesting data on the subject of goiter and the percentages are so high in the goiter belt that they warrant attention of medical men.

Upon adjournment of the 25th Annual Meeting of the American Proctologic Society, which was held June 23-25, in the New York Academy of Medicine, some twenty of the members journeyed to London on invitation of the English Fellows, who are the leaders of the specialty in Great Britain.

#### BETTER CARE FOR MOTHERS

A Nation-Wide movement to improve maternity conditions has been begun by the American Gynecological Society, the American Child Health Association, and the American Association of Obstetricians, Gynecologists and Abdominal Surgeons

7,478 industrial accidents to young workers under 21 years of age occurred in one year in three states, according to a study just completed by the Children's Bureau of the U. S. Department of Labor.

In a lecture "Bakteriologie und Patentrecht," by Dr. Fritz Warschauer, Berlin, Patent Agent, delivered on the recent meeting of German scientists and physicians at Innsbruck, the bacteriology has been, for the first time, discussed minutely from the point of view of the German Patent right. The lecturer showed on hand numerous specifications that the German Reichs-Patentamt has, in acknowledging a justified claim, granted patents for bacteriological process. According to former decisions an invention was considered to be patentable in Germany only if it related to mechanical or chemical treatment or working up of raw materials, viz. if by technical means a technical effect was obtained. In praxi the Reichs-Patentamt has, however, given up this antiquated notion, probably in consideration of the development of the bacteriologic science, and by a recent decision it has expressly acknowledged that processes and methods are patentable which utilize the vital proceedings of nature. A list combined by the lecturer showed that many famous scientists and leading chemical factories are inventors and proprietors of the bacteriological patents.

Removals: Dr. L. C. Spencer, from Shreveport to New Orleans, Louisiana. Dr. Don S. Marsailles, from Shreveport, Louisiana, to Amarillo, Texas. Dr. Robert A. Davis, from 510 Medical Building to 1208 Maison Blanche Building, New Orleans. Dr. J. A. McDevitt, from Shubuta, Mississippi, to Gulfport, Mississippi.

#### MEDICAL NEWS ITEMS

The semi-annual meeting of the Fourth District Medical Society will be held in Shreveport on November 12th. Dr. T. J. Fleming, of Mansfield, is president, and Dr. J. W. Heard, City Bank Bldg., Shreveport, is secretary.

The Tri-State Medical Society of Arkansas, Louisiana and Texas will hold its 20th annual session in Shreveport on December 9 and 10; papers by members and disinterested guests are expected to make this meeting a banner one. Dr. A. C. Chase, of Texarkana, is president, and Dr. F. H. Walke, Ricou-Brewster Bldg., Shreveport, is secretary.

The people of Shreveport and vicinity are awaiting with much interest the appointment of the new board of directors of Shreveport Charity Hospital by Governor Fuqua. It is understood that there will be changes in the personnel of the staff, as the present superintendent, Dr. W. P. Morrill, has, according to reports, accepted a position in Indianapolis.

The staff of the new North Louisiana Sanitarium, composed of the resident members of the North Louisiana Clinic and the visiting men, was organized on October 9th. The following officers were selected to serve for the balance of this year, viz: Dr. Thos. Ragan, President; Dr. Geo. B. Dickson, Vice-President; Dr. M. D. Hargrove, Secretary. Regular monthly meetings will be held on the fourth Tuesday of each month.

#### PUBLICATIONS RECEIVED

The MacMillan Company: "X-Rays and X-Ray Apparatus," by John K. Robertson. "A Text-

book of Surgical Handicraft," by J. Renfrew White, M. S., F. R. C. S. "The Clinical Examination of Surgical Cases," by J. Renfrew White, M. S., F. R. C. S.

J. B. Lippincott Company, Philadelphia and London: International Clinics, Vol. III, thirty-fourth series, September, 1924.

Funk & Wagnalls Company, New York and London: "Health of the Worker, How to Safeguard it," by Lee K. Frankel, Ph. D. "The Child in School, Care of its Health," by Thomas D. Wood, M. D. "Your Mind and You, Mental Health," by George K. Pratt, M. D. "Adolescence, Educational and Hygienic Problems," by Maurice A. Bigelow, Ph. D. "Home Care of the Sick," by Clara D. Noyes, R. N. "Exercises for Health," by Lenna L. Means, M. D.

Paul B. Hoeber, Inc., New York: Annals of Roentgenology, A Series of Monographic Atlases, edited by James T. Case, M. D. "Normal Bones and Joints," by Isidore Cohn, M. D., F. A. C. S. with a foreword by Rudolph Matas, M. D.

C. V. Mosby Company, St. Louis: "Fundamentals of Human Physiology," by R. G. Pearce, B. A., M. D.

G. W. Carnrick Co., New York: "Organotherapy in General Practice."

Renouf Publishing Company, Montreal: "Students' Guide to Operative Surgery," by Alfred T. Bazin, D. S. O., M. D.

Harvard University Press: "A Present-day Conception of Mental Disorders," by Charles MacFie Campbell, M. D.

Reprints—"Controlled Diaphragmatic Breathing in the Treatment of Pulmonary Tuberculosis," by S. Adolphus Knopf, M. D.

Operative Surgery, covering the operative technique involved in the operations of General and Special Surgery, by Warren Stone Bickham, of New York City, M. D. and Phar. M. (Tulane)—M. D. (Columbia)—F. A. C. S., etc. Containing 6,378 illustrations, many in colors in six volumes, 8° and a separate Seventh desk Index Volume. W. B. Saunders, Publishers, New York and London (1924).

This treatise may be regarded as an encyclopedia, since it covers in its scope the entire field of operative surgery, including the operations of gynecology, obstetrics, genito-urinary, orthopedics and the eye, ear, nose and throat specialties. It is the outgrowth of the Author's Textbook of Operative Surgery, 3rd Edition, which was published in 1908. Some idea of the magnitude of this treatise may be obtained by the following facts: It embraces six large octavo volumes with the addition of a seventh general index volume; 2,000,000 words and over 6,300 illustrations, many in colors, and made expressly for this work. Forty-six artists were kept busy for four years under the supervision of the author, who devoted the greater part of ten years towards its completion. Save for the artists, the author has worked at this huge task unassisted by outside collaborators, depending upon his own experience and knowledge of the literature to bring the text to the latest and most approved standards of surgical technic.

The subject matter of these six volumes is divided into three parts or divisions, subdivided into 97 chapters. Part I (four chapters) includes the General Principles and Procedures that are common to all operations; Part II (twenty-five chapters) the general surgery of the tissue systems, arteries, veins, lymphatics, nerves, tendons,

muscles, etc. This division also includes skin grafting, plastic surgery, dermoplastics, artificial prosthesis, amputations, including the cinematoplastic methods; artificial limbs, etc.; Part III (seventy-two chapters) is devoted to regional surgery, in which all the operations in the various regions and organs of the body are individually considered. The first three volumes of the series which have reached us contain respectively 846, 1097 and 965 pages, including the indexes to each volume.

It would be impossible in the limits of this review to give anything like an adequate description of this treatise and of the thorough, painstaking manner with which the author has developed each subject and dealt with it in all its multitudinous phases. Nothing is omitted that could excuse anyone from understanding an operation through lack of detailed explanations. If such a thing were possible as learning how to operate solely from books this surely would be an unerring guide. This reminds us of a spicy comment once made by Warren Stone, (after whom the author is named, who said "that surgeons who had learned to operate from books and plates should be allowed to operate solely upon them," and yet, perhaps, no one appreciated the aid of books and plates more than he did.

The author's long training as a teacher of operative surgery is evident in many instances when well standardized operations are described, in which the directions are given with a precision and order that remind us of a military maneuver. One of the distinguishing features of the book, and also, the reminder of a long and well acquired didactic habit, is the orderly, methodical and systematic manner in which all the matter is classified and presented. The discussion of the topographical or regional anatomy which precedes the description of every important operation is conspicuous throughout the book. From this point of view this treatise may well be regarded as a synopsis of surgical anatomy, as well as a treatise on operative surgery. We are old-fashioned enough to believe that the importance attached by the author to surgical applied anatomy in the training of the surgeon can never be exaggerated and is most opportune now at a time when knowledge of anatomy is apparently at a discount, and is regarded by, unfortunately, too many ambitious, but unbaked surgeons, as an unnecessary superfluity. It would seem that as long as the operator can keep out of the aorta, a knowledge of the trilogy,—“cut, clamp and tie,” with perhaps the addition of a pair of rubber gloves and a dab of iodine,—is quite sufficient license to dig into the body with safety. Fortunately for those who appraise anatomy on such easy terms, a glance at this book will quite suffice to shatter their philosophy.

In a cursory survey of the three volumes that lie before us we are immediately struck by the lucidity with which all the elements of wound treatment are considered. For instance, in volume I, no one can fail to be instructed by the complete review of the many and diverse methods of knot tying in ligating and suturing. We know of no treatise, American or foreign, in which the ingenuity of surgeons in devising methods of ligation and suture, are better exhibited than in this work. We commend this chapter to the especial attention of teachers of minor surgery as they will find here the material for the lucid exposition of a knowledge of fundamental importance that is usually very imperfectly taught, and, still less, acquired by the average student or surgical assistant. In the same volume the chapters on

amputations, including the cinematoplastic and the adaptation of artificial limbs, will prove especially interesting and new to many readers.

In the second volume, the Surgery of the Vascular System is presented in a modern way that is unrivalled in any other treatise. The author's original contributions to the operative treatment of arterio-venous aneurism, which have notably contributed to the advance in the treatment of this type of aneurism, and his association with Dr. Matas in New Orleans have given him a special interest and competence in this branch of Surgery which is well shown in this discussion. The same praise may be given to the surgery of the specialties, eye, ear, nose and throat, and of the brain and the spinal cord, which constitute the bulk of the matter discussed in this volume.

In the third volume, the general surgeon will be especially interested in the discussion of the more familiar surgery of the thyroid and mammary glands and in the more arduous problems of thoracic and mediastinal surgery. In all these, the same meticulous care to bring the subject up to date will be noted. In dealing with the thyroid we regret that the illustrations that appeared in Professor Halsted's "Operative Story of Goitre," in which the several stages of Halsted's operation are presented with an anatomical accuracy and artistic finish that are only possible in the master hands of a Brodel, have not been utilized for this special chapter. The supreme heights of Art attained by Brodel and his pupils have not only revolutionized the older and primitive standards of Medical illustrating in America, but have made us perhaps fastidious and over critical in our tastes. We should be thankful, however, that there are so many non medical artists who are able to grasp the details of surgical anatomy and operative technic with as much lucidity and excellence as we see in this book.

The author and the publishers are to be warmly congratulated on the completion of the most comprehensive, systematic treatise on pure operative surgery and surgical technic that has been issued by the Medical Press of this country as the result of the unaided effort of one author; nor do we know of any treatise on operative surgery in foreign countries that can compare with this in completeness and volume and copiousness of illustrations that have been the outcome of one man's unaided efforts. There are, of course, many great systems and encyclopedias of surgery and of pure operative surgery, which have appeared in America and abroad, and which reflect the greatest credit upon the literary ability and activity of surgeons throughout the world, but all these are co-operative works, in which many authors have united in collaboration to produce it.

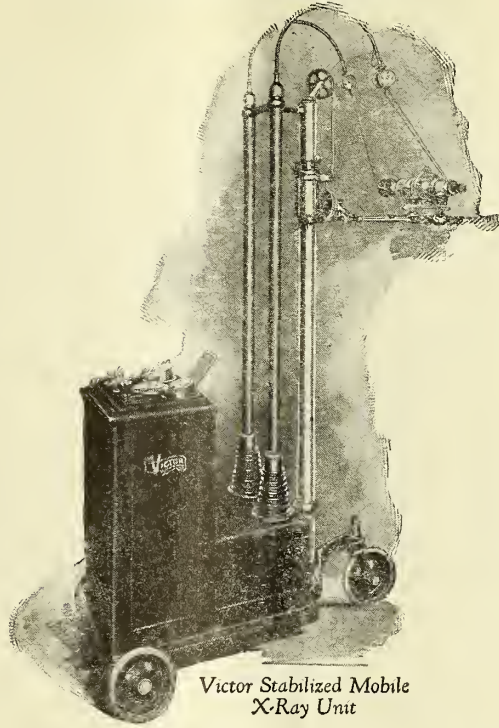
The appearance of this great work is invested with special significance at this moment in the history of medical publishing in this country. It indicates at least three things. First, the existence of surgeons of ability and experience who are capable of engaging single-handed in enormous literary enterprises and who are satisfied to consecrate a large part of their lives to their consummation; second, the willingness of publishers to risk a large financial outlay in their production; third, the confidence of both authors and publishers in the readiness of the professional public to back them with their material support. While there is nothing new in this tripartite cooperation of author, publisher and the public in the publications of large and exhaustive treatises of this character, the event is significant in the

fact that it gives the best proof of the enormous development of Surgery in this country and of the deep and widely diffused interest that is taken in its purely technical problem. In other countries, especially in the continent of Europe, —Germany, France Italy,—where the relations of the publishers of scientific books and the universities as sources of the most important professional literature, are invested with a semi-official character, the situation is quite different from that which obtains in this country. There the policy of the publishers is largely dictated by what the great leaders in the universities think is necessary or important for the advance of their respective departments, as well as for the national prestige. There the scientific, surgical or literary value of the book is the first consideration, its commercial or marketable value is of secondary importance as long as the cost and a small margin of profit can be expected from it. In this way, books dealing with subjects of the most abstruse character and circumscribed scientific interest, necessarily of very limited circulation, and commercially unprofitable,—always find a ready publisher. No doubt the status of labor and the economic situation in Europe have much to do with the situation. Here it is otherwise. The relations between the publishers and the universities and the teachers who contribute the largest quota of authorship is not as closely interdependent and the publishers must look to the marketable quality of his book before he will venture on a large outlay. There are, of course, always exceptions, but medical publishing is essentially a commercial enterprise in which the matter of production is dependent upon the demand and sale of the product. Viewed from this point, the appearance of such a costly production as the one before us is an encouraging sign of the times, as it shows that the publishers have felt the professional pulse and decided that the time is ripe for the prescription. In this, we fully agree and feel confident that the author and his publishers will reap a reward that will fully come up to their expectations. A work of this character must necessarily be a book for consultation and reference. It is evident that the conquests of surgery are constantly pushing forward into new territories and that the tactics and strategy of Surgery are also shifting and varying with every advance. It is notorious that surgical, even more than medical text books, begin to grow old from the moment they leave the press, and even while they are being printed. The value of a reference book, especially in operative surgery, lies in the fact that it is a basic source of information up to the time of its publication. But from that time on, the reader who intends to keep up with progress must supplement the book of reference with the new contributions that are steadily pouring in from all quarters. To do this, the special surgical journals, year books and periodical publications must be read and kept on file. With this proviso, the progressive student, general practitioner and specialist in surgery can safely invest in this sumptuous work with the assurance that they will not only get back their money's worth but will lay the foundation for a reference library of incalculable value on modern operative surgery.

R. M.

Dr. Rudolph Matas, Professor of Surgery at Tulane University, was honored with the presidency of the American College of Surgeons, at their recent Conference held in New York City.





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Owned and Published by THE LOUISIANA STATE MEDICAL SOCIETY

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\$2.00 per Annum, 25c per Copy  
Volume 77, Number 6

DECEMBER, 1924

Published Monthly in New Orleans  
at 1551 Canal Street

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Next Annual Meeting Louisiana State Medical Society, New Orleans, April 21-23, 1925

Next Annual Meeting Mississippi State Medical Association, Biloxi, May 12-14, 1925

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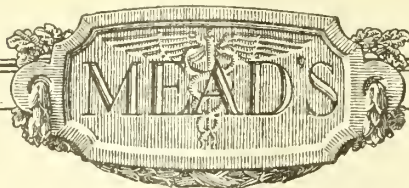
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Vol. 77

DECEMBER, 1924

No. 6

## THE USE OF RADIUM IN THE TREATMENT OF BENIGN AND MALIGNANT CONDITIONS OF THE UTERUS (WITH REPORT OF CASES)\*

THOMAS B. SELLERS, M. D.

*(Associate Professor of Obstetrics and Gynecology, Tulane University, Post Graduate School of Medicine.)*

NEW ORLEANS.

After four years' use of radium in my gynecological work, I believe that radium is as necessary to the Gynecologist as X-ray is to the Dermatologist. Every Gynecologist, or physician doing gynecology, then should familiarize himself with the therapeutic properties of Radium; so he can determine:

1. When it should be used.

2. The dosage, and the amount of screening. An accurate diagnosis should be made, as the indiscriminate use of radium cannot be too strongly condemned. Infection is always a contra-indication to its use. Much of the prejudice against the use of radium is due to three things:

1. Faulty technique in its application.

2. Improper dosage.

3. A lack of knowledge of its indications and its limitations.

In spite of all precaution, however, occasional complications will occur. This is no discredit to radium, similar complications occur in our surgical work.

You will note from my case-histories below that the method of application of radium is individualized, but there are, however, basic principles in treating carcinoma of the cervix.

1. Do not apply radium where there is extensive involvement of the recto-vagi-

nal or vesico-vaginal wall, as there is danger of causing a fistulae.

2. Prepare the patient as for a vaginal operation and give a general anaesthetic (preferably nitrous-oxide and oxygen), so the radium can be properly placed. Pack the vagina well with gauze to hold the radium in position. Do not allow patient to sit up until after the radium has been removed.

3. Only remove sections from the cervix when the diagnosis is questionable and do not cauterize the cervix prior to applying the radium.

This does not aid in the treatment, but increases the risk of infection and of dissemination of the growth.

4. The family physician and patient should know what to expect—also the necessity for subsequent treatment and observation.

Radium in the treatment for carcinoma of the cervix, except in cases where the recto-vaginal or vesico-vaginal wall is extensively involved. Before radium replaced surgery in the treatment of carcinoma of the cervix, we divided our cases into three arbitrary groups:

1. Operable.

2. Border-line.

3. Inoperable.

Until about two years ago, I operated on the early or operable cases, so I can make only a preliminary report on these cases. I have handled seventy-two cases of carcinoma of the cervix in the past four years. Unfortunately, a large percentage of them were in the inoperable group.

I believe the result even in the advanced cases justified the use of radium in that they were relieved of the discharge and much of the pain for a period of from three to eighteen months. There were two exceptions to this, one in a very advanced case, where radium should not have been applied, another was a young woman twenty-four years old with a moderately ad-

\*Read before the Orleans Parish Medical Society, September 22, 1924.

vanced carcinoma of the cervix; in this case the growth was apparently stimulated by heavy doses of radium. I've been able to follow up seven of my operable and borderline cases. Four are clinically cured at eighteen months, one at two years, two at two and one-half years.

There are several other operable cases that I have lost track of which I am confident will stand the five years' test.

I am convinced by my own experience and by that of other men who used radium that the benefit is obtained from the giving of maximum amount of radiation during the first two applications (not more than four weeks apart). After this the case should be carefully watched and radium *should not* be reapplied unless there is an unquestionable recurrence of the growth, and then it should be applied in small doses, well screened.

#### EARLY CARCINOMA OF CERVIX

February 20, 1921. Mrs. E. J. B. Age: 41. Married.

*Complaint.* Hemorrhages for last three months; loss of weight; foul vaginal discharge.

*Past History.* Negative.

*Menstrual History.* Ten pregnancies, all normal deliveries.

*Present Illness.* Three months ago pains and irregular menstruation. Had slight hemorrhage between menstrual periods.

*Physical Examination.* Negative. General condition—good.

*Vaginal Examination.* Eroded hypertrophied cervix. (Carcinoma).

*Treatment.* Under a general anaesthetic. Ninety Mg. Radium screened with one millimeter of silver in a celluloid capsule applied in cervical and vaginal canal. One month later—Ninety Mg. Radium screened in same manner again applied.

Four months later—discharge ceased, no pain; cervix slightly red but no erosion.

Fourteen months later—improved; has not menstruated since application of Radium.

*Total Radiation.* Four thousand three hundred and twenty Mg. hours.

April 11, 1922. Mrs. A. L. Age: 41. Married.

*Complaint.* Hemorrhage and foul discharge.

*Past History.* Negative.

*Menstrual History.* Negative.

*Present Illness.* Began two months ago with a foul discharge; very slight amount of blood.

*Physical Examination.* Recent loss of weight; otherwise negative.

*Vaginal Examination.* Small cauliflower growth on cervix about the size of an egg; bleeds freely, when touched.

*Treatment.* Under a general anaesthetic. Ninety Mg Radium screened with one millimeter of silver in a celluloid capsule for twenty-four hours. (Intracervically). Patient did not return in four weeks as advised.

Two months late—hemorrhage had ceased; growth reduced in size; gained ten pounds in weight. Ninety Mg. Radium again applied for eighteen hours. (Same Screening).

Thirty months later—Patient clinically cured.

*Total Radiation.* Three thousand seven hundred and eighty hours.

July 7, 1922. Mrs. A. D. Age: 45. Married.

*Complaint.* Womb trouble.

*Past History.* Supravaginal hysterectomy. (Four years ago), otherwise negative.

*Menstrual History.* About two years ago patient suffered with continuous hemorrhage; was then operated on for uterine fibroid with good results for a time; then about a year ago began to notice a bloody discharge from vagina and pain in lower abdomen. Supravaginal hysterectomy.

*Physical Examination.* Negative. General condition—good.

*Vaginal Examination.* A hypertrophied and ulcerated cervical stump. Microscopic examination; early carcinoma of cervix.

*Treatment.* Under a general anaesthetic. Fifty Mg. Radium, screened with one millimeter of silver in a celluloid capsule applied in cervix for ten hour and four-ten Mg. needles in each quadrant.

One month later—Fifty Mg. Radium screened in same manner applied in cervix twelve hours.

Six months later—cervix was smaller, a slight hemorrhage from vault of cervical stump.

Twenty-four months later—cervix was flush with vaginal vault; no discharge; much improved.

*Total Radiation.* Fifteen hundred Mg. hours.

December 10, 1923. Mrs. M. P. Age: 50. Married.

*Complaint.* Swelling of feet and shortness of breath.

*Past History.* Negative except for organic heart lesion.

*Menstrual History.* Negative.

*Physical Examination.* Enlarged heart with systolic murmur. General condition—good.

*Vaginal Examination.* Ulcer, clinically early carcinoma, confirmed by microscopic examination.

*Treatment.* Under a general anaesthetic. Four needles ten Mg. each buried in each quadrant of cervix, and fifty Mg. of Radium screened with one millimeter of silver and celluloid capsule placed in cervical canal. Patient failed to return as directed one month later.

Two months later—Ninety Mg. Radium screened with one millimeter of silver in celluloid capsule placed in cervical canal twenty-four hours.

Three months later—no ulceration of cervix; patient much improved.

Ten months later—Clinically cured. Gaining in weight and feeling fine.

*Total Radiation.* Four thousand three hundred and twenty Mg. hours.

#### MODERATELY ADVANCED CARCINOMA OF CERVIX

10-11-21. Mrs. M. G. Age: 59. Married.

*Complaint.* Hemorrhage twelve years after menopause.

*Past History.* Edema of hands and feet for last five years; shortness of breath.

*Menstrual History.* Negative. Menopause twelve years ago.

*Present Illness.* Began six months ago with hemorrhage and foul discharge.

*Physical Examination.* General condition—poor. Systolic murmur at apex; edema of hands and feet.

*Vaginal Examination.* Large cauliflower mass on cervix. Bleeds easily when touched, very friable. Vaginal vault infiltrated with growth.

*Treatment.* Under a general anaesthetic. Ninety Mg. Radium screened with one millimeter silver in

celluloid capsule applied in cervix twenty-four hours. Thirteen months later—mass decreased in size but hemorrhage began again. Ninety Mg. Radium was applied twenty-four hours against vaginal vault, well screened with (One millimeter silver, one millimeter rubber buried in a ball of beeswax to protect rectum).

Three months later—hemorrhage ceased, cervix flush with vaginal vault; greatly improved.

Two years and ten months later—cervix smooth—no sign of malignancy. Pains in region of rectum, but not severe.

*Total Radiation.* Forty three hundred and twenty Mg. hours.

#### ADVANCED CARCINOMA OF CERVIX

9-12-22. Mrs. I. M. Age: 65. Married.

*Complaint.* Hemorrhage and foul discharge.

*Past History.* Negative except abscesses on neck short time ago.

*Menstrual History.* Negative.

*Present Illness.* Began six months ago with hemorrhage; four months ago noticed bloody discharge. Continuous since that time.

*Physical Examination.* General condition—fair.

*Vaginal Examination.* A large cauliflower mass around whole cervix.

*Treatment.* Under a general anaesthetic. Fifty Mg. Radium, screened with one millimeter silver in a celluloid capsule applied in cervix. Four-ten needles buried in mass in each quadrant of the cervix for twenty-four hours. Patient did not return in four weeks as advised.

Four months later—Growth very much smaller and partial stricture of the vagina. On account of stricture and the period of time that had elapsed between treatment, I thought it wise to use Deep X-ray instead of Radium.

Six weeks later—developed X-ray burn but at that time she was generally much better. No discharge from vagina.

Twenty months later—Improving.

Twenty-three months later—Much improved—except pain in lower abdomen.

*Total Radiation.* 2160 Mg hours and Deep X-ray.

#### MODERATELY ADVANCED CARCINOMA OF CERVIX

9-22-23. Mrs. B. C. Age: 33. Married.

*Complaint.* Hemorrhages for first three months.

*Past History.* Negative.

*Menstrual History.* Negative.

*Present Illness.* Began about three months ago with a hemorrhage and a foul discharge from vagina.

*Physical Examination.* Negative. General condition—good.

*Vaginal Examination.* A hypertrophied and eroded cervix, bleeds easily to touch.

*Treatment.* Under general anaesthetic. Fifty Mg. Radium applied in cervical canal twelve hours by another physicaian (screening not known).

One month later—Ninety Mg. Radium screened with one millimeter of silver in a celluloid capsule applied in cervix twenty-four hours.

One month later—another application of ninety Mg. Radium screened in similar manner applied in cervix.

Four months later—cervix smooth, flush with vaginal vault hemorrhage and discharge had ceased.

Eleven months later—Some pains and a disagreeable discharge.

*Total Radiation.* Four thousand nine hundred and twenty Mg. hours.

#### ADVANCED CARCINOMA OF CERVIX

11-16-23. Mrs. M. R. Age: 42. Married.

*Complaint.* Hemorrhages.

*Past History.* Negative.

*Present Illness.* Nine months ago severe hemorrhage, has been hemorrhaging a little since that time; severe pains in lower abdomen.

*Physical Examination.* Negative.

*Vaginal Examination.* Large cauliflower mass infiltrating vaginal vault, very friable, bleeds easily.

*Treatment.* Under a general anaesthetic. Fifty Mg. Radium screened with one millimeter silver in a celluloid capsule applied in the cervical canal and four-ten milligram needles buried in each quadrant of cervix for twenty-four hours.

One month later—Ninety Mg. Radium screened in same manner applied in cervical and vaginal canal twenty-four hours. Symptoms relieved at first.

Seven months later—patient died. Uterine carcinoma.

*Total Radiation.* Forty-three hundred and twenty Mg. hours.

#### ADVANCED CARCINOMA OF CERVIX FIBROID

1-15-24. Mrs. L. P. Age: 42. Married.

*Complaint.* Bleeding from vagina past six months; loss of weight.

*Past History.* Negative.

*Menstrual History.* Negative except for present illness which began six months ago. One child, who died one week after delivery.

*Present Illness.* Began six months ago when menstruation increased from four days to twelve or fifteen days duration. Gradually increased until now is practically constant. Has lost twenty pounds.

*Physical Examination.* Negative.

*Vaginal Examination.* Large but short cervix; bleeds very easily to touch; very painful. Several large foul tissue sluffs were obtained when cervix was dilated. A very large nodular mass filled greater part of lower abdomen; rather tender to palpation. Carcinoma of cervix and uterine fibroid.

*Treatment.* Under a general anaesthetic. Ninety Mg. Radium screened with one millimeter of silver in a celluloid capsule applied in cervical canal twenty-four hours.

Forty days later—mass decreased in size, cervix rather firm, ninety Mg. Radium screened in same manner applied in cervical canal twenty-four hours.

Four months later—cervix flush with vaginal vault.

General condition—good. Hemorrhage ceased; menstruation ceased.

Seven months later—pains in lower abdomen, but no discharge.

*Total Radiation.* Forty-three hundred and twenty Mg. hours

#### UTERINE FIBROIDS

As experience with the use of Radium in the treatment in uterine fibroids has increased, its indications and limitations are better understood. Radium is the treatment of choice in intra-mural uterine fi-

broids, not larger than a four months' pregnancy in women over forty years of age. This is true also in the treatment of small sub-serous fibroids. It is a well-known fact among men that use Radium that the more uniform the uterine enlargement is the more readily it responds to this treatment. A preliminary application of radium or X-ray will often make surgery possible and safe in removing large fibroid tumors incarcerated in the pelvic cavity (encroaching on bladder and rectum). Radium is used in the treatment of fibroids on women under forty, only when there is some contra-indication to surgery, such as a severe anaemia, tuberculosis, cardiac and renal disease, high blood pressure and obesity. Where the sex and reproductive life is to be conserved, it is not safe to use over four hundred m. hrs. of radium. I've used radium on twenty uterine fibroids. On two of these it was used preliminary to an operation. One had a subsequent hysterectomy, the other was so much improved that she refused an operation. The remaining eighteen cases are symptomatically cured.

#### UTERINE FIBROID

3-7-22. Mrs. A. L. Age: 45. Married.

*Complaint.* Hemorrhaging.

*Past History.* Negative.

*Menstrual History.* Negative except present illness.

*Present Illness.* Began two years ago with irregular menstruation often missing two months and then hemorrhaging freely.

*Physical Examination.* General condition—good.

*Vaginal Examination.* Eroded cervix and a uterine myoma about the size of a grape-fruit. (Intra-mural).

*Treatment.* Dilatation and curettage was done under a general anaesthetic. Ninety Mg. Radium screened with one millimeter of silver in celluloid capsule applied in body of uterus and cervical canal twelve hours.

Two months later—cervix much smaller and firm. At that time ninety Mg. Radium screened in similar manner placed in body of uterus twelve hours.

Twenty months later—tumor much smaller, erosion disappeared—has not menstruated since last application of Radium. Gained twenty pounds.

*Total Radiation.* Twenty-one hundred and sixty Mg. hours.

3-15-22. Mrs. T. H. Age: 49. Married.

*Complaint.* Hemorrhaging.

*Past History.* Negative.

*Present Illness.* Began about six months ago with severe hemorrhaging, continued to hemorrhage more at each menstrual period.

*Physical Examination.* Rather anaemic. General condition—poor.

*Vaginal Examination.* Small polypoid growth in cervix; uterus very much enlarged. Intra-mural fibroid.

*Treatment.* Dilatation and curettage was done under a general anaesthetic and ninety Mg. Radium

screened with one millimeter of silver in celluloid capsule applied in body of uterus for twenty-four hours.

Nine months later—hemorrhaging ceased; general condition much improved; fibroid much smaller.

Twenty-four months later—discharge cured.

*Total Radiation.* Twenty-one hundred and sixty Mg. hours.

#### UTERINE FIBROID

7-10-22. Mrs. E. J. L. Age: 41. Married.

*Complaint.* Excessive hemorrhage. Prolonged menstruation.

*Past History.* Infantile paralysis as a child; operated on for appendicitis three years ago; gonorrhoea twenty years ago.

*Menstrual History.* Negative except for present illness.

*Present Illness.* Began about six months ago when menstruation became prolonged to about ten days duration.

*Physical Examination.* Negative. General condition—good.

*Vaginal Examination.* Fibroid about the size of a grape-fruit in the body of the uterus. (Intra-mural).

*Treatment.* A dilatation and curettage was done under a general anaesthetic. Fifty Mg. Radium screened in one millimeter of silver and two millimeters of rubber applied in body of uterus for twelve hours.

Four months later—hemorrhage ceased; uterus decreased in size; gained in weight.

Twenty-three months later—not menstruated since application of Radium—gained in weight. Feel absolutely well—not nervous.

*Total Radiation.* One thousand and eighty Mg. hours.

7-24-22. Miss L. M. Age: 45. Married.

*Complaint.* Pains in back and left side.

*Past History.* Negative.

*Menstrual History.* Negative except pains three days before and three days after menstruation and profuse flow.

*Present Illness.* Began about eight months ago with pains in lower part of back and left iliac region, associated with profuse menstrual flow. (Menorrhagia and metorrhagia).

*Physical Examination.* Very anaemic and under-nourished. General condition—poor. Haemoglobin 40 per cent.

*Vaginal Examination.* Fibroid tumor about the size of an orange (intra-mural), and several sub-serous about the size of an egg.

*Treatment.* Dilatation and curettage was done under a general anaesthetic and fifty Mg. of Radium screened in one millimeter of silver and one millimeter of rubber applied in body of uterus for twenty-four hours.

Twelve months later—menstruation had ceased; haemoglobin increased.

Eighteen months later—uterus one-half original size; haemoglobin 80 per cent. Patient feeling absolutely normal. Uterus much smaller.

*Total Radiation.* Twelve hundred Mg. hours.

2-24-23. Mrs. F. F. Age: 40. Married.

*Complaint.* Hemorrhages.

*Past History.* Negative.

*Menstrual History.* Negative until two years ago when present illness began. Three children, normal deliveries.

*Present Illness.* Began two years ago when menstruation became gradually prolonged until at



each period was forced to go to bed and at each period became more profuse.

*Physical Examination.* Very anaemic and undernourished; otherwise negative. Haemoglobin 45 per cent.

*Vaginal Examination.* Uterine fibroid, intramural and multiple small sub-serous.

*Treatment.* Dilatation and curettage was done under a general anaesthetic. Ninety Mg. Radium screened in one millimeter of silver in a celluloid capsule, applied in body of uterus twenty-four hours. Hemorrhage continued thirty days after first application of Radium.

Two months later—Hemorrhage ceased and feeling much better.

Twelve months later—feeling normal again. Gained in weight. Haemoglobin 70 per cent. Uterus about normal size.

*Total Radiation.* Twenty-one hundred and sixty Mg. hours.

8-14-23. Mrs. K. F. Age: 26. Married

*Complaint.* Irregular and painful menstruation; bleeding for six months. Pains in back.

*Past History.* Negative.

*Menstrual History.* Negative except present illness.

*Present Illness.* Began six months ago when menstruation became irregular and prolonged. (Fifteen days). Severe cramps during flow. Pains in lumbar region almost constant.

*Physical Examination.* Negative. General condition—poor. Very sallow and anaemic. Haemoglobin 55 per cent.

*Vaginal Examination.* Fibroid size of a small orange in cul-de-sac. Another large one in fundus—several small sub-serous over body of uterus.

*Treatment.* Dilatation and curettage was done under a general anaesthetic. Fifty Mg. Radium screened in one millimeter of silver one millimeter rubber in a celluloid capsule applied in body of uterus for twenty-four hours.

Twelve months later—has not menstruated since application of Radium—feeling much better. No discharge—tumor much smaller. Haemoglobin 85 per cent. On account of size of the fibroid tumors, I gave a larger dose of radium that I ordinarily use on a woman twenty-six years old.

*Total Radiation.* One thousand and eighty Mg. hours.

1-5-24. Mrs. M. B. Age: 40. Married.

*Complaint.* Bleeding from vagina.

*Past History.* Negative.

*Menstrual History.* Negative. Four children, normal deliveries.

*Present Illness.* Began two years ago when menstrual period gradually prolonged from four or five days duration to hemorrhaging which became constant.

*Physical Examination.* Negative except for a mass in lower abdomen about one half the distance to the umbilicus. Very fat. Weight two hundred and forty pounds. Poor surgical risk.

*Vaginal Examination.* A large movable uterus extending almost to umbilicus; bleeding from vagina during examination. Intra-mural fibroid.

*Treatment.* Dilatation and curettage was done under a general anaesthetic and ninety Mg. Radium screened in one millimeter of silver in a celluloid capsule for twenty-four hours.

Two months later—hemorrhage had ceased after menstruating once. Ninety Mg. Radium screened in same manner was again applied for twenty-four hours.

Six months later—mass decreased one-half original size; hemorrhage ceased. Slight pains in lower abdomen. No discharge.

*Total Radiation.* Four thousand three hundred and twenty Mg. hours.

#### IDIOPATHIC HEMORRHAGE IN YOUNG WOMEN

Radium has come to our rescue in handling irregular uterine bleeding in girls and young women. Before using radium a careful vaginal examination should be made under an anaesthetic to be sure of an accurate diagnosis. In young girls it is not safe to apply over fifty Mg. for four hours. A conclusion as to the result cannot be drawn until after six months. In cases of failure, however, the same dosage can be reapplied after this time.

The cases that I've handled have been relieved with one treatment except one. She returned for subsequent examination. This time I found an ovarium cyst which had evidently been overlooked in the previous examination.

#### IDIOPATHIC HEMORRHAGE

4-1-22. Miss S. Age: 24. Single.

*Complaint.* Excessive menstrual flow, lasting twelve to fourteen days, associated with severe cramps before and during flow.

*Family History.* Negative.

*Past History.* Operation three years ago. Operation was dilatation and curettage. Only relieved temporarily. One year ago had appendix removed and portion of right ovary.

*Menstrual History.* Started menstruating when thirteen years old. Always irregular and suffering during the flow, but has grown worse during the past three years.

*Vaginal Examination.* Negative.

*Treatment.* Dilatation and Curettage was done under a general anaesthetic. Fifty Mg. Radium four hours. Screening one m.m. silver one m.m. rubber in celluloid capsule. One year later she returned for examination. Stated that her menstrual flow lasted five or six days and was practically free from pain.

8-29-22. Mrs. J. H. P. Age: 25. Married.

*Complaint.* Irregular and profuse menstruation. *Past History.* Bilateral salpingectomy four years ago.

*Menstrual History.* Always irregular; four days duration. Two children, normal deliveries.

*Present Illness.* Began one year ago when menstruation lasted from eight to fifteen days with severe pain.

*Physical Examination.* General condition—fair, anaemic from loss of blood.

*Vaginal Examination.* Slightly lacerated cervix. Uterus soft, about normal in size and hemorrhaging freely.

*Treatment.* Under a general anaesthetic, a preliminary dilatation and curettage was done prior to applying fifty Mg. Radium screened in one millimeter of silver and five millimeters of rubber applied in body of uterus. (Five hours).

One month later—a severe hemorrhage at normal menstrual period.

Two and one-half months later—hemorrhage had ceased but suffering with cramps in lower abdomen; relieved by codeine.

Four months later—free from symptoms—started to menstruating normally.

*Total Radiation.* Two hundred and fifty Mg. hours.

#### MENORRHAGIA ABOUT TIME OF MENOPAUSE

The dosage of radium is not of a great deal of importance in this class of case. I believe, however, it is better to give one large dose to be sure of stopping the hemorrhage, than to give repeated small doses. I've had 100 per cent cures with these cases.

2-12-24. Mrs. M. D. Age: 49. Married.

*Complaint.* Bleeding from vagina for six months.

*Past History.* Negative

*Menstrual History.* Twelve children, two miscarriages, Menstruation regular until last six months.

*Present Illness.* Began six months ago with severe hemorrhages from vagina; has continued to bleed since that time.

*Physical Examination.* Negative.

*Vaginal Examination.* Perineum was relaxed; cervix lacerated; bleeds easily when touched. Clinical diagnosis; chronic endometritis. Microscopic examination—negative for malignancy.

*Treatment.* Dilatation and curettage was done under a general anaesthetic. Ninety Mg. Radium screened with one millimeter of silver in a celluloid capsule applied in body of uterus for twenty-one hours.

Four months later—much improved; hemorrhage ceased and slight ulceration of cervix persistent. Not malignant.

One year later—feeling fine—no discharge.

*Total Radiation.* Twenty-two hundred and fifty Mg. hours.

2-14-24 Mrs. C. T. Age: 48. Married.

*Complaint.* Irregular, prolonged menstruation.

*Past History.* Operated on seven years ago for laceration of cervix and uterine fibroids.

*Menstrual History.* Negative except present illness.

*Present Illness.* Began seven years ago with hemorrhages and severe pain in lower abdomen. At that time the cervix was amputated, the left ovary was removed, and a myomectomy was done. For five years was improved, then present illness began with constant hemorrhage.

*Physical Examination.* Negative. General condition—good.

*Vaginal Examination.* Amputated cervix; uterus small, anti-flexed and not freely moveable. Diagnosis—myopathic hemorrhage.

*Treatment.* Dilatation and curettage was done under a general anaesthetic. Ninety Mg. Radium screened with one millimeter of silver in a celluloid capsule applied in body of uterus twenty-four hours.

Four months later—hemorrhages ceased after a flooding attack, one month after Radium was applied. She has since had a slight yellow leucorrhoea.

Six months later—discharged cured.

*Total Radiation.* Twenty-one hundred and sixty Mg. hours.

3-3-24. Mrs. T. R. B. Age: 42. Married.

A case of Dr. Briere.

*Complaint.* Hemorrhages.

*Past History.* Negative.

*Menstrual History.* Two children; normal deliveries.

*Present Illness.* Began eighteen months ago with severe continuous hemorrhages. Total red blood count at that time 1,750,000; haemoglobin

25 per cent. A dilatation and curettage was done, followed by arsenic and iron, internally. The blood count six months later was 3,000,000; haemoglobin 45 per cent. At that time, the hemorrhage began again and it has been continuous since. She did not report for treatment until her general condition was about like it was before the curettage.

*Physical Examination.* Very anaemic—poorly nourished; otherwise negative.

*Vaginal Examination.* Uterus enlarged; hemorrhaging freely. No tumor.

*Treatment.* Dilatation and curettage was done under a general anaesthetic and ninety Mg. of Radium screened with one millimeter of silver in a celluloid capsule applied for twenty-four hours.

Two months later—hemorrhage ceased completely; haemoglobin 60 per cent, total red corpuscles 4,000,000.

*Total Radiation.* Twenty-one hundred and sixty Mg. hours.

I wish to thank Doctors Chas. H. Voss, D. C. McBride, and J. R. Evans for their assistance.

### INSULIN IN THE SURGICAL COMPLICATIONS OF DIABETES\*

SEALE HARRIS, M. D.

BIRMINGHAM, ALA.

When Doctor Dearman gave me a very kind invitation to attend this meeting and take part in the discussions, I wrote him that I would be delighted to come, that I always enjoyed the meetings of the Mississippi State Medical Association, and always learned something worth while—and this meeting is no exception to that rule.

After hearing some of the papers and discussions from your local men, as well as from my confrere, who formerly lived in Alabama, I am reminded of a conversation that occurred in Paris soon after the signing of the Armistice, when I was at luncheon with Doctor Finney and Doctor Crile. Doctor Finney said to Doctor Crile, "What is your outstanding impression of the things you have learned of the work that has been done by the American medical officers in France?" Doctor Crile replied, "I have been watching men operate up and down the front and I have seen men that I never saw before, from places I never heard of, doing just as good surgery as you and I are doing." Then Doctor Finney was asked as to his impressions, and he said the same thing—that he had been struck with the fine work in surgery that was being done by men from all parts of the country. They asked my impression, and it was this—that, coming out from the War, all over the country, in small towns as well as large cities, there

\*Read before the Mississippi State Medical Association. Jackson, May 13-14, 1924.

would be groups of men gotten together and doing just as good work as the groups in the great medical centers, in the North, and the East and the South. I am quite convinced of that after my work in the Southern Medical Association, because we found men all over the South, even in the country districts, sometimes just one man, doing just as good work as the professors in the great universities, and if I may embarrass your President, I would like to say that Doctor Dearman, at Long Beach, is doing just as good work in internal medicine as Barker at Johns Hopkins and the men of the other great clinics.

The President asked me to talk for a few minutes, and I hardly know what to talk about, unless it is the new treatment for diabetes. Perhaps something along that line might be serviceable from a surgical viewpoint. There is no question but that the discovery of insulin by Banting is one of the great, epoch-making discoveries of this or any other age, and that, because of it, thousands of people are alive today who would not be living were it not for this discovery. It has an especial bearing in surgery, because, with this new treatment, and with the diabetic patient properly dieted, there is no reason why the diabetic should not be just as good a surgical risk as the man who is not a diabetic. Of course, if a diabetic has the surgical condition of gangrene or any other complications it is important to prepare him for operation by dieting and by the use of insulin, rendering his urine not only sugar free, but remembering that acidosis is the thing most to be afraid of in any form of diabetes.

We happen to have had a number of cases of diabetes in which there were surgical complications, some of which we were able to prevent by the use of insulin. Before the use of insulin, I do not remember to have seen a case of gangrene that healed without operation. Since the use of insulin we have had several cases where we told the patients we believed operation would be necessary, but with the use of insulin and dieting, after a few days the gangrenous areas would slough off and the wound heal nicely.

Another point in surgery on diabetics, for instance, for perforating ulcer of the foot, under former conditions amputation was never done below the knee. With the use of insulin it is possible to save the knee joint and the upper third of the leg. I recently had a talk with Doctor Westmoreland, of Atlanta, and he said that in his

experience, before the discovery of insulin, he had never seen a case of perforating ulcer of the foot in which an operation was necessary that was not finally amputated above the knee, and that he had been doing that as a primary procedure after a good deal of experience; that in nearly all these cases the patient died within a year or two from diabetes. We have had several cases of perforating ulcer of the foot, one case which I recall, in which amputation was made at the lower third, and the patient made a perfect recovery. Another case in which amputation was made for an immense perforating ulcer—amputation at the upper third, with excellent recovery. These patients have been doing very well since then.

Among other things of surgical interest in diabetes is the possibility of mistaken diagnosis in early coma, before the patient is completely unconscious. We had one patient brought to us in coma in which there was a perfect picture of acute appendix plus drowsiness of the patient. He had no symptoms of diabetes such as are usually noticed, but he did have a voracious appetite, he was drinking a good deal of water, and was getting up at night to urinate. The doctor the week before had found sugar in the urine; then he had acute pain in the abdomen and fever; he was also drowsy. When the physician found his urine loaded with sugar he put him on a train and sent him to us, and by the time he got to Birmingham he was in complete coma. The outstanding symptoms of that case were rigidity of the abdomen and marked tenderness, and although he was in coma, pressure over the abdomen would make him writhe. In twelve hours by the use of insulin the case was cleared up. And, by the way, the important thing in these cases of coma is to clean out the intestinal tract by repeated enemas and salines, because intestinal toxemia often precipitates diabetic coma.

We had another case, a child, that was brought to Birmingham by his physician with a diagnosis of acute intestinal obstruction. On making an examination of the urine it was found loaded with sugar and the case turned out to be one of diabetic coma. Unfortunately the patient died in a few hours.

We had another interesting case with surgical complications, in which I believe insulin saved the boy's life. This was a boy 15 years of age, who had a severe diabetes in which there was practically a total loss of function of the pancreas, no in-

sulin being secreted, and, while he was in the infirmary, he developed pain in the abdomen. We suspected impending coma, except that he did not have diacetic acid in his urine. Then he developed fever and a leukocytosis, and we made a diagnosis of acute appendix. He was operated under local anaesthesia, and an acute appendix found and enucleated. It was a drainage case, and without insulin he surely would have died. He made a slow but good recovery, and is now taking the insulin himself.

Another point regarding surgery in diabetics is important, and that is ether increases sugar in the urine and should not be used in the case of a diabetic if it can be avoided. Local anaesthesia is the choice because there is less shock and less acidosis. Next to that, of course, gas and oxygen is the anaesthetic. In the surgery of diabetes, of course, the surgeon and physician must co-operate, because the results that follow operation will be determined as much by the diet and the use of insulin as by the surgical technique of the operator.

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#### SOME OBSERVATIONS FROM THE NEUROLOGICAL CLINIC OF THE CHARITY HOSPITAL AT NEW ORLEANS\*

L. L. CAZENAVETTE, M. D.

NEW ORLEANS.

I shall not in the following lines burden you with statistical reports of cases seen and treated in the nervous clinic of the Charity Hospital, nor shall I attempt a detailed summary of what has been done for these patients, but I wish to call your attention to some observations of a general character which in a great measure concern the welfare of the class of patients that, because of the nature of their illnesses seek relief in this special line of service.

The cases seen in these clinics during my time of service have been very numerous and the diseases presented by them varied widely. It is very probable that the material as a whole covered a wide range of the known diseases of the nervous system; certainly all of those that, in spite of their gravity, permitted the patient to come and occasionally to be carried to the clinic. These patients represented diseases affecting all parts of the nervous system—

brain, cord and especially the peripheral nerves—the functional diseases as well as the neuroses, psycho-neuroses and others were very frequently seen.

Borderline and frank psychoses were numerous.

Occasionally acute affections of the nervous system were seen; but the great majority of cases were of the chronic or residual types. It must be observed here that many patients came to the clinics, months and even years after the onset of their malady, when nothing could be done for them. Think of a case of hemiparesis coming eleven or more years after the onset of his paralysis, a case of tabes in the advanced ataxic stage, etc., etc.

Reports from all hospitals show that the greatest number of cases in the nervous clinics belong to the syphilitic group. And as the years go by this group grows larger. One will naturally seek the reason for the increase in the number of such cases of today as compared to that of a score of years ago. Not that they differ so much in their clinical manifestations, but because of their greater frequency. No doubt, thorough method of neurological examination and the help given us by the laboratories have helped to place into this group cases definitely as syphilitic, that years ago might have been classified otherwise. On the other hand, the great advances made in the treatment of syphilis, since the discovery of salvarsan and allied preparations, should, perhaps, by this time, begin to show its effects by causing a diminution in the number of such cases. But this is not the case. Has too much reliance been placed on these preparations to the neglect, perhaps, of the time-honored and proven beneficial effects of mercury and iodide? These thoughts are brought to mind from the histories of our patients, from which we frequently read that they had been given a number of intravenous medications thought sufficient in the presence of repeated negative Wassermann reactions to be considered cured.

It is a known fact that cases of syphilis when properly treated in the early stages will give a negative serum Wassermann, when it had been positive before, and that this serum Wassermann may remain negative for a long time. But a negative serum Wassermann, even with negative physical findings, does not mean that the patient has been cured. For we know too well that the spirochete may invade the nervous system shortly after the initial sore, i. e., about the time of the secondaries, and, in

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\*Read before the Louisiana State Medical Society, Opelousas, April 22-24, 1924.

order to know whether this important organ has not been invaded, it is necessary to have recourse to the laboratory and to have a cerebro-spinal fluid test made. (Last at end of third year of treatment).

The procedure is not dangerous when done carefully.

In the hands of many men, no case of syphilis is discharged as cured unless the patient has been free from the clinical manifestations of the disease, kept under observation for several years and all laboratory findings repeatedly show negative results. But how many satisfy themselves and pronounce their patients as cured after serum negative reactions. Perhaps we have here an explanation for the increased number of neuro-syphilitics.

Referring again to the material seen in these clinics years ago, as compared to that of recent years, it is surprising to note the almost total absence of cases of multiple sclerosis. Cases coming to us with well marked spasticity, intention tremor, scanning speech and mystagmus, the cardinal symptoms of this most interesting disease, formed a large part of our chronics of years ago. Today, however, such cases are seldom seen much to the disappointment of the teacher in nervous diseases. Here again the question may be asked: Why is it that we see so few such cases? Has the disease begun to disappear from our midst, or have these cases been absorbed in the large group of syphilis of the nervous system. For some have contended that multiple sclerosis is of syphilitic origin.

Again our retrospect recalls the fact that of recent years there has been a total absence of cases of progressive muscular atrophy of the pseudo hypertrophic type. Few cases of paralysis resulting from poliomyelitis have appeared in the clinic in recent years.

Following times of stress and visitation in the community of certain diseases as influenza, we see in our clinics cases showing the effects of such conditions on the nervous system. These cases come to us more frequently in the form of functional disorders of the nerve exhaustion type.

During the past few years, there have been a small number of cases showing involvement of single cranial nerves. After a complete survey of these cases, it was evident that they belonged to the group of encephalitis, a disease which has also furnished us cases with post-encephalitic syndromes of the Parkinsonian, dystonias and other varieties. It was evident from the

clinical symptoms, that the lesions were nuclear in origin.

I have called your attention to conditions that are of great interest and worthy of further consideration, but let me divert an instance and call your attention to a few observations which I hope will prove of benefit to your patients.

I have reference to the most frequent form of paralysis that we see. That is facial paralysis. This disease is not fatal in itself, but is a matter of serious consequence to the patient. It has been said that the psychic effect outweighs the physical defect, and we have found this to be the case in many instances. As you know its most frequent cause is exposure. It has for this reason been called refrigeration palsy. It may be due to many other causes, but from whatever cause you can almost always render your patient much more comfortable by the application of some means of rest and support to the paralyzed muscles, which at the same time may help in the diminution of the course of the disease.

This I have done in our clinics for many years. It consists in the application of Z. O. strips in such a way as to support the sagging side of the face. Thus: One strip 1-2 inch wide is made firm at a point under the lower lip about the mid line, traction is then made in the direction of the ear and the other end of the strip is made firm either in front of the ear or behind the ear. Another strip is made firm over the upper lip and pulled up and out in the same direction and made firm as above. With these two strips firmly in place, the pull or traction from the muscles on the normal side of the face is then exerted on the Z. O. strips and not on the paralyzed muscles. A small strip may be used to hold up the drooping lower lid. This strip helps to close the eye and prevents the dryness of the conjunctiva and its attendant discomfort. Such applications render the patient at once comfortable. He is relieved of the weight of the sagging muscles on the paralyzed side. This enables him to eat, speak and drink with greater comfort. There is no doubt in my mind that in the cases in which this method was used the course of the disease was very much shortened. This does not mean that other applications to the face and whatever medications deemed necessary should not be carried out. Of course, these strips must be replaced whenever they become loose, but should be used continuously for a period of at least three weeks.

In cases of musculo-spiral paralysis the use of an angular splint for the purpose of rest and support to the hand will accomplish a similar purpose. In these two forms of paralyses, as in many other paralyses of peripheral origin, it is the writer's opinion that a persistent use of electricity of the proper form is of great benefit. Electricity has its proper place in the treatment of these and other diseases of the nervous system, and much good can be gotten by it in properly selected cases. The same may be said of the new methods of physio-therapy, which, because of their concrete mode of application, are of particular benefit to the nervous patients.

A point of observation which I think of sufficient interest to call your attention to here is the frequent ease with which we are likely to make diagnoses of epilepsy. I have seen many cases which "a priori" from the history alone could have been diagnosed as such, but, after more careful and complete examinations with laboratory findings, were diagnosed otherwise. This is not of importance merely from a statistical or clinical point of view, but it must be remembered what a diagnosis of epilepsy means to the patient, and many of them are conscious of this fact, that they are affected with an incurable disease. This point alone should make us still more careful in the proper study of these cases.

As previously stated, there are at all times coming to the clinic cases belonging to the large group of neuroses and psychoneuroses, and to the group of mentally deficient. As much time as possible is given towards the proper study of each individual case. But these patients require more of the physician's time than is usually given to ordinary cases. For it is necessary here to go into the details of each case in order to smooth out difficulties that are so frequently a contributing cause of their complaint. This demands a proper knowledge of the home surroundings and environment under which these patients live. This information is gotten through the social service department under the directorship of Miss L. Bachman. I wish to say here that Miss Bachman and her co-workers have responded cheerfully and willingly, at all times, to our request for their services, and have rendered the service invaluable aid in many trying circumstances.

With regards to the cases showing mental disease, in the young as well as in the adult, which still come to us, I believe they should be referred to a unit (clinic) where

psychiatric cases, especially in children, and their problem could be studied.

Before closing, I wish to say that many patients come to the clinic from the adjacent parishes. Many of them do not require hospitalization. They could be handled perfectly well as out-clinic cases, and relieve the over-crowded conditions of the hospital wards. The suggestion is made here that some instruction to that effect be given such patients by the physician referring the case. A word from him covering his observation of the case, particularly so when the patient does not speak English, would be much appreciated by the clinician.

#### DISCUSSION

Dr. Roy M. Van Wart (New Orleans): Doctor Cazenavette's paper is extremely timely. In this clinic the doctor is able to see the kind of cases that will walk into his office, rather than hospital cases. A large number of patients will never reach the stage where it is necessary to hospitalize them, and, unless one is familiar with this type of case, he is apt to lose sight of this class of nervous disorders.

I think Doctor Cazenavette is right in his statement regarding the mental deficiency of certain types of nervous disorder. We do not see today the typical class of case that we formerly called multiple sclerosis. I think also that we see less of the typical organic cases, and I think most of that is due to the changed policy in regard to the admission of patients to the Charity Hospital. The relative number of these cases is comparatively small, and when it was made impossible to admit cases from other states it naturally cut down the source from which these types would be derived. Formerly we saw as many cases from neighboring states as from Louisiana; today this is not true—we see comparatively few from surrounding states.

In regard to the syphilis problem, I believe that there is a tendency to try to attribute every type of organic nervous disease to this cause. I would like to utter one word of warning, and that is that one Wassermann reaction is not a specific reaction. There are other conditions which will set free lymphoids besides syphilis. There are a number of cases wherein destructive conditions produced by tumors of the spinal cord and brain have given positive Wassermann reactions. I have known of four or five cases where there was a positive Wassermann, and where at autopsy we found nothing but gross tumors. So the presence of this reaction is not diagnostic in the absence of typical clinical findings. The question of careful clinical training is the only way we can learn to differentiate, and it is extremely unfortunate that the laboratory in many instances has quite taken the place of the careful clinical examination that is necessary to differentiate the various types of nervous disorders. I am thankful that more training should have been in the days before the laboratory, when we depended entirely upon clinical examination for our means of differentiating these cases.

In regard to the treatment of syphilis, I must disagree with Doctor Unsworth that syphilis of the nervous system is a late manifestation. Unfortunately, in many cases it is early. I have a case of meningitis that was taken on November

27th and was admitted to Touro Infirmary in January, a typical syphilitic meningitis with destructive conditions from which she has not recovered.

In the treatment, I wish to emphasize the fact that the intraspinal method is of great value in many cases. Where we find we have a case of central nervous system syphilis in which other methods have failed, the intraspinal method offers a means of help to a certain number, although I will not say all, but a certain number. I have one case in mind in which some forty intraspinal injections were given in two and a half years. The man, when I first saw him, was a typical case of general paresis; but in four weeks he could return to his occupation, and has been able to continue since that time. Unfortunately, his spinal fluid is not negative, and he is not cured, but he is, at least, able to work, and that after other methods had failed to benefit him. This is true in a great many cases, and I believe there are a certain number of central nervous system syphilis cases which can be, if not cured, the condition improved by the intraspinal method.

Dr. J. D. Young (Shreveport): I want to congratulate Doctor Cazenavette on his paper and to call your attention to some facts brought out in regard to epilepsy. I have seen a number of cases diagnosed epilepsy, but when spinal puncture was done they were found to be suffering from cerebrospinal syphilis.

The other point he brought out in regard to the cranial nerve is rather important. We are seeing quite a number of these today, especially resulting from lethargic encephalitis.

The occurrence of syphilis being more frequent can be explained by the fact that the old-time method of salvarsan has not been reinforced by the old-time method of mercury and the iodides, and so quite a number of cases are discharged after the blood Wassermann is said to be negative. Our experience is that 25 per cent of all syphilitic infections give a negative blood Wassermann and a positive spinal fluid Wassermann, and this 25 per cent as a rule have been treated by the intraspinal method and discharged as cured.

The method employed in cerebrospinal syphilis is salvarsan, spinal puncture, and drainage of an ounce of spinal fluid some one or two hours afterwards; then a mercurialized serum made by dissolving 1-80 gram of bichloride of mercury in two drams of the patient's own cerebrospinal fluid and reinjecting it into the arachnoid space. Under these conditions we often do not cure, but sometimes we are able to hold these cases in abeyance, and even in some cases cure them.

Dr. C. V. Unsworth (New Orleans): I have been very much interested in Doctor Cazenavette's paper because for quite a while I had a service at the Charity Hospital. As you know, cerebrospinal syphilis is a very important subject and the neurological symptoms are always a late manifestation, for the reason that the nervous system has more resistance than any other part of the body. When the average case of syphilis is treated, the man is given a little mixed treatment, and he may have a blood examination made; he may continue on and get some salvarsan, and finally he gets a negative blood Wassermann and the doctor thinks he is cured. As a matter of fact, the method I pursue in treating cerebrospinal syphilis is this: I first give the patient iodide of potash for ten days, which will drive the spirochaete into the blood stream, and then I give him salvarsan. I give him a dose

about every six or seven days until I have given him six doses. Then I give him mixed treatment over a period of six weeks. I then give him a rest of six weeks, and then have a spinal and blood Wassermann. I do not think you can put any reliance at all upon the blood Wassermann; from the neurological standpoint we have to depend upon the spinal fluid Wassermann. If the man is then negative I continue to give him iodide of potash for about a month, and then I give him another six doses of salvarsan. At that time I have another spinal fluid examination made and if that is negative, then instruct him to have a spinal fluid examination about every three months, and in the meantime I put him on protiodid of mercury and tell him the necessity of watching his condition over a period of ten or fifteen years. We cannot tell when a man is rid of syphilis. When I was at Charity Hospital a man was supposed to be cured after 3 years of medical treatment.

I believe the time to treat cerebrospinal syphilis is when the man gets the initial sore. If he gets a sore when he is eighteen years of age, by the time he is referred to the neurologist he finds he is stumbling around and cannot walk very well or has some symptoms of paresis. It is then too late for the neurologist to do him any good. I think that accounts for the fact that Doctor Cazenavette does not see so many of these cases, these chronic neurological cases, in his clinic. I believe the men know better how to treat syphilis, they understand the necessity of continuing the treatment, and I think social service has helped us out wonderfully in instructing the people how to take care of themselves. It is educational, the same as tuberculosis or any other disease.

With reference to the paralysis that the doctor spoke of, we do see a great many of these cases, and I imagine the adhesive strips will relieve the terminal forms. I do not believe if you have a central lesion that you will ever get well of that. I think where just a portion of the nerve that supplies the muscle becomes involved then with massage, or electricity, or hot and cold applications the patient, as a rule, makes a good recovery, or there is no deformity. There is sometimes a second portion of the canal involved, where it passes through the Fallopian tube, due to middle ear disease. Sometimes these cases get well, but I do not believe they get well if it is a central lesion. What we need is a psychiatric clinic and these cases should be referred to it.

With reference to epilepsy, I agree that anyone should be careful about making a diagnosis of epilepsy. We have means of making these diagnoses and there is not much trouble to differentiate between a case of epilepsy and a case of hysteria.

Dr. E. McC. Connely (New Orleans): I would like to reiterate what has been said in regard to lumbar puncture. I think most of us invest lumbar puncture with too much sanctity, as it were. We impart to it the dignity of a surgical operation, and while I do not wish to give the impression that lumbar puncture is not serious, on the other hand I do not believe that if a man knows his business lumbar puncture is anything to be dreaded, and I do not believe that serious results will come from it. I think a great many of our bad results, as Doctor Cazenavette has pointed out, are due to the fact that we do not make a puncture early.

As to epilepsy, I most heartily agree with Doctor Cazenavette as to the indiscriminate diagnosis

of epilepsy. It is so generally considered to be an incurable disease that the effect on the patient is bad, and we must not forget that a great many things cause convulsions besides epilepsy. Cerebral lues, hysteria, almost any toxic condition, especially alcoholism.

Dr. W. J. Otis (New Orleans): Lues, from the inception of the infection, should be treated radically. We know that there have been patients who came to us with the following story: "I had an infection, the infection was cauterized. I was patted on the back and told I was all right." Other patients will report that they had two injections and the doctor told them they were cured. Of course, we suppose the patient is telling the truth. The result is the case remains untreated, he tries this, that and the other patent blood medicine, which does no good; he shows signs of early paresis, and the ultimate result is the involvement of the entire cerebrospinal system with subsequent N. P. hospital care. On the other hand, there are cases which are treated by the intravenous, intraspinal and intraventricular routes, and still remain general paretics. These injections have been done under most skillful procedure. The moral is—treat radically, treat early, treat continuously within reason. If you feel that a man has no money to be treated by you, send him to the nearest free clinic. Salvarsan is expensive and most people do not have the money to buy mixed treatment. If you treat radically and early, and instruct these people, you thereby prevent a number of taboparetics and tabetics.

When we make a diagnosis of epilepsy we are treading on dangerous ground unless we know the individual is epileptic. All convulsive movements are not epilepsy. They may have convulsions from excesses of all sorts, auto intoxication and the like.

Social service has done much for the care and follow-up in our Charity Hospital at New Orleans. We have one of the most up-to-date social service departments in our hospital. Should any physician write for information concerning their patients, we will do our best to answer, and if we, in turn, write to you for information be good enough to answer our questions. Especially those patients who have language difficulties and in whose case a concise abstract will aid us. Please do not send frank psychoses to the hospital. We have no psychopathic pavillion, nor does the State make provision for a psychotic patient as such. The patient arrives with an attendant, is admitted, only to be transferred to a mental hospital or returned home—causing much discomfort to the patient, much waste of energy with no results as to comfort for the patient.

Dr. L. L. Cazenavette (closing): I wish to thank the discussors for their kind remarks and to again emphasize the necessity for more thorough and continuous treatment of every case of syphilis, especially when seen in early stages, in order to prevent its late manifestations on the nervous system. The treatment should not be stopped until one has made a thorough search for traces of the disease and found these absent. This search, aside from clinical findings, should include the examination of the spinal fluid. Spinal puncture, when done properly by experienced hands, is not a dangerous procedure. Some patients believe it is and refuse to have it done because they have heard of bad results. But when told of the great importance of the information obtainable thereby, they usually consent. For the good of your patient, if you feel unable

or unwilling to do it yourself, send him to some competent laboratory to have it done.

In regard to epilepsy, I wish to emphasize the seriousness of branding one as an epileptic. Be sure the patient has nothing else to explain the attacks before making a diagnosis of epilepsy.

## ACUTE INTESTINAL OBSTRUCTION NECESSITATING INTESTINAL RESECTION\*

H. R. SHANDS, M. D.

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As long as the general mortality of acute intestinal obstruction remains at or above fifty per cent, it must continue to be a subject of consuming interest to the surgeon. That this great mortality can be considerably reduced we will all admit.

In intestinal obstruction probably more than in any other surgical condition the cause of death is delay. Prompt operative treatment will always be the greatest factor in the reduction of this excessive mortality. The general practitioner must be constantly reminded that any acute abdominal pain lasting over three or four hours calls for a prompt surgical consultation. It will probably be many years before surgeons can hope to always receive cases of intestinal obstruction at an early and uniformly favorable time for operative treatment. This being true, it will not be amiss for us to consider the methods of treatment which are indicated in the various stages of acute obstruction.

The general principle might first be stated that the object of the treatment is to relieve the obstruction, by whatever method will leave us a living patient. The principles of treatment may be summarized under several different classes of cases.

*Class 1.* The acute obstruction which develops within the first week after an abdominal operation, and which is due as a rule to fresh adhesions from a localized peritonitis, is usually best treated by a simple enterostomy, preferably made high up in the jejunum and under a local anaesthetic. After this simple treatment, in a few days the lumen of the bowel most often becomes re-established, and no fistula is left at the enterostomy opening. When possible the omentum should cover the enterostomy opening in the bowel and the tube pass through a small rent in the omentum. Should the lumen of the intestine not become patulous, further operative

\*Read before the Mississippi State Medical Association, May 13-14, 1924, Jackson, Miss.



treatment will, of course, be necessary later.

*Class 2.* In those cases of obstruction which occur after the convalescence from a previous laparotomy or which occur independently of an abdominal operation, the treatment must vary according to the time the patient is seen after the obstruction occurs; (a) if the patient is seen within the first twenty-four or thirty-six hours, when his condition is good and before distention has occurred and when vomiting of intestinal contents has not yet begun, the stomach should be washed out, a general anaesthetic given and the cause of the obstruction searched for and removed. In this case the abdomen may be safely closed without drainage of the bowel. Gastric lavage should be continued post-operative.

(b) Second stage, when the patient is not seen until later, thirty-six or forty-eight hours after the obstruction, his general condition may still be good, but there is abdominal distention with severe vomiting, which may or may not be stercoraecous. In this case, after washing out the stomach, under a general anaesthetic, the cause of the obstruction should be relieved, but before closing the abdomen an enterostomy should be done to drain off the poisonous contents of the proximal bowel. Here the enterostomy should be done just above the obstruction. The post-operative treatment will include gastric lavage and irrigation of the bowel with glucose and soda solution through the enterostomy tube and by rectum.

(c) Third stage. In the third stage the general condition of the patient is bad, with weak, thready pulse, Hippocratic facies, abdominal distention and stercoraecous vomiting. Now nothing more than a simple high enterostomy under a local anaesthetic should be attempted. The bowel and stomach should be irrigated and later liquid nourishment given through the enterostomy tube. Should the patient survive, a few days later the cause of the obstruction should be relieved through another incision, if it has not relieved itself. The above principles of treatment are generally concurred in at this time.

*Class 3.* In those cases of acute obstruction where it is necessary to resect a portion of the bowel, on account of gangrene, malignancy, etc., there does not seem to be any unanimity of opinion as to what is the best course to pursue. Many surgeons still do an immediate anastomosis after resection for acute obstruction. Monahan states: "There are few rules so binding

upon the surgeon as that which prohibits the resection of growths and subsequent end to end anastomosis of the large intestine in cases of acute obstruction." My belief is that Monahan is eminently correct in enunciating this principle, both as regards the large and small intestine. The object of any treatment is not to save the occasional case, but to save the largest percentage of cases of any given condition. Usually, if a resection is found to be necessary in acute obstruction the operation can be more safely done in two stages. At the first stage the gangrenous bowel is excised and after tying in tubes, the proximal and distal ends of the open intestine are sutured into the abdominal incision, allowing for the freest possible drainage. Later when the patient is in good condition, the ends of the bowel should be sutured so as to re-establish the intestinal canal. Even when treated in this way the immediate convalescence will be stormy enough.

The occurrence of an intestinal gangrene profoundly disturbs the innervation of the non-gangrenous bowel, as shown by much ileus and distention post-operative. This free drainage will allow none of the poisonous contents of the proximal intestine to descend for absorption into the distal end. Fluids which are so necessary may be introduced constantly for absorption by the distal intestine. The supplying of fluids and the removal of poisonous contents are the two compelling desiderata.

Hypodermoclysis and gastric lavage should also be used. The bowel above the gangrene is usually edematous, badly congested and often cyanotic. Certainly it is not in condition for immediate suture if you expect satisfactory union. It is surprising how easy it is to get perfect union at the second stage of the operation, when the bowel and patient have returned to a more or less normal condition.

I realize that the force of this argument would not be so great if the gangrene occurred well up in the jejunum. However, a gangrenous ileum or large intestine is found ten times as often as a gangrenous jejunum. If the resection of the intestine is done high up in the ileum or in the jejunum there is some danger of starvation from lack of absorption before the escape of the chyle. In this case after a day or so the discharge from the proximal end may be collected and injected with other liquid food into the distal intestine.

After a few days the tubes which are tied into the protruding ends of the bowel fall out. Then the irritation of the abdom-

inal wall from the fecal escape is sometimes annoying. This may be attenuated by the use of zinc oxide ointment, ambrine or Balsam of Peru. The best way in which to prepare the skin of the abdomen for the subsequent anastomosis is to remove all dressings from the wound and have someone sit beside the patient and immediately wipe off with gauze the irritating chyle as it is discharged. In two or three days in this way the skin can be brought back to fairly normal condition.

As stated above the bowel heals quite readily after a simple end to end suture at the second stage of the operation. It has been my practice to do an enterostomy five or six inches above the anastomosis when the bowel is sutured. I have never had an enterostomy opening which did not close spontaneously if the enterostomy tube was left in place for six or seven days.

The same principles of treatment apply if acute obstruction is caused by a cancer of the large intestine. Here the three-stage operation of Von Mikulicz had best be used. Of course in this case a preliminary colostomy might be done, and later the resection be accomplished at one stage. I think, though, the Mikulicz the safer plan.

The principle of the Mikulicz operation on the large intestine may be used in a three-stage operation for resection of the small intestine, as described by Mixter. In this plan when the diseased bowel has been excised, the proximal and distal segments are sutured together laterally near the open end for a distance of three inches. The open ends with the tubes tied in place are brought through the abdominal wall in a shot gun fashion. A week or ten days later a crushing forceps is introduced into the open ends and left clamped upon the exposed bowel walls until it cuts through. Then with a local anaesthetic the fistula can be readily closed. This will obviate the necessity of a second general anaesthetic and of a second entry into the general peritoneal cavity.

A point worthy of mention which is not often stressed in this: Whenever gangrene of any of the abdominal viscera occurs as a rule on opening the abdomen you will find blood-stained serum. If you had planned the doing of a simple enterostomy and found bloody serum in the abdomen, the operation should proceed until the cause of the obstruction is found. A patient cannot recover if intra-abdominal gangrene is left in situ.

There certainly are cases in which the

surgeon may be justified in doing an immediate anastomosis after resection of acute obstruction. If the condition of the patient is unusually good this might be permissible. However, if the obstruction had existed long enough for gangrene to supervene, very seldom will the patient be in such a good condition as to permit the complete operation at one stage. Very much the safest plan in the general run of cases is the two or three stage operation.

The one-stage resection and anastomosis will be indicated more often in cases of gangrenous strangulated hernias than if the gangrene had occurred within the abdominal cavity. Gangrene in a hernial sac shut off from the general cavity does not seem to be so quickly and excessively depressing. Even strangulated hernias requiring resection, the two or three stage operation will not infrequently save lives that would be lost in the attempt to do too much at one time. The late Dr. John Young Brown, of St. Louis, emphasized this point twenty years ago.

I present three cases of acute intestinal obstruction requiring resection on account of gangrene. These are all the cases of this kind I have treated in the past twenty months since we began keeping accurate records at the Baptist Hospital. At least, this plan of procedure has worked well in these few cases. I am sure none of these boys would be alive had I attempted to do a one-stage operation. As it was their condition the first day after the first stage was precarious.

Case 1. F. S., age 17. First admitted to the Baptist Hospital April 1, 1923. He was referred by Dr. A. V. Hunter, of Crystal Springs, who saw him for the first time on the day he sent him to the hospital. At operation, a perforated gangrenous appendix was removed. This had caused a general peritonitis. Two weeks later he went home in fair shape. He was re-admitted three months later, July 16, 1923, at 1:00 a.m., when the following history was obtained. Following his return home after the first operation he was sick with a bowel trouble and some fever for ten days. After this he made satisfactory improvement and had been well until July 14, 1923, at 10:00 p.m., at which time he began having cramps in the abdomen after eating a hamburger and playing baseball in the afternoon. Dr. Hunter was called July 15, 1923, at 5:00 a.m. and suspected intestinal obstruction on account of the abdominal cramps and failure of the bowels to move. That afternoon he began to vomit large quantities of bile stained fluid and intestinal contents. He was re-admitted to the hospital at 1:00 a.m., July 16, 1923, with a pulse of 130 and noticeable abdominal distention. The abdomen below the navel was quite tender and rigid. He was operated upon under ether anesthesia. On opening the abdomen blood-stained fluid escaped. The obstruction was caused by a volvulus of the lower ileum. Twelve

inches of gangrenous bowel was resected and the ends of severed gut sutured into the incision. The drainage was satisfactory but the abdominal distention became so great that thirty-six hours later a high enterostomy was done under a local anaesthetic. Two weeks later, on July 30, the ends of the bowel were sutured together. He was discharged cured on August 12, and has since then remained well.

Case 2. J. O., age 11. Referred to Baptist Hospital by Dr. Percy Hudson, of Utica, December 5th, 1923. On December the 3rd, at noon, he was taken with abdominal cramps, followed by vomiting, and then soreness in the abdomen to the right side and below the navel. His father gave him six or eight doses of salts, from the morning of Dec. 3 to the morning of Dec. 5th, at which time Dr. Hudson was called. Dr. Hudson brought him in immediately with a diagnosis of an acute surgical abdomen, probably due to an acute appendicitis. On admission his temperature was 98.4, pulse 90 and abdomen somewhat distended and rigid. He did not look to be exceedingly sick at my examination. This note was made on the history: "Abdomen noticeably rigid and somewhat distended. Unquestionably an abdomen with something wrong in it. No hernia. Rigidity much more marked on right side and very tender over McBurney's point." A general anaesthetic was given and the abdomen opened with the escape of bloody serum. An ileo-cecal intussusception was found with eighteen inches of gangrenous ileum. The intussusception was caused by an inverted Meckel's diverticulum. The dead bowel was excised and the ends sutured in the wound. He was quite sick for a few days and continued to have a slight daily rise of fever with rapid pulse. After two weeks he was allowed to go home to further recuperate before the second stage of the operation. After five weeks he returned and an end to end suture done with good recovery.

Case 3. This case was treated through the courtesy of Dr. John McLain, who happened to be out of town when the obstruction occurred. J. M., age 19. Two weeks before admission this patient was operated upon in Lexington by Dr. John McLain for the removal of a ruptured gangrenous appendix. Two drains were left in the abdomen. He had a smooth convalescence for two weeks before the present trouble developed. On February 7, 1924, at 11:00 p.m., he began to suffer with severe abdominal cramps, nausea and vomiting. He was given castor oil and numerous enemata, but his bowels would not move. A diagnosis of intestinal obstruction was made by Dr. G. G. Ash and patient brought to the hospital, arriving at 9:30 p.m., February 8, 1924. On arrival his temperature was 96 1-2, pulse 100, abdomen distended and rigid with exaggerated peristalsis. Dr. Ash's diagnosis was concurred in, and after washing out the stomach the abdomen was opened under a general anaesthetic. There was a large escape of bloody serum on incising the peritoneum. A very large gangrenous volvulus of the ileum was found, necessitating the resection of five feet of dead bowel. Ends of the intestine with tubes tied in were sutured in the incision. This was a desperately sick patient who had to take a seventy-mile automobile trip immediately before the operation, and a cold night. He was greatly shocked after the operation. By next morning he was much better and began to improve steadily. The second stage of the operation was easily performed twenty days later, March 16, 1924.

These three boys were so sick, that I feel sure all of them would have died had I attempted to do a complete operation at one stage.

During this same twenty months I have operated upon ten cases of intestinal obstruction of all kinds, with two deaths.

#### DISCUSSION

Dr. John Darrington (Yazoo City): The Doctor has covered very thoroughly the treatment of these cases of obstruction, but a word may be said as to diagnosis. This paper could be very properly brought before a gathering of medical men, men who do not do surgery. As a matter of fact, it is the family physician who is called upon to make this diagnosis, and the result of the surgery following will depend on how well he does his work.

The symptoms of intestinal obstruction are so classical that it would seem a man could not make a mistake, but that is not true. Many of these cases the obstruction comes on gradually. Another mistake is that when we see a patient with pain in the stomach we assume it is caused by something he has eaten and we give him purgatives, the worst thing we can do, because that masks the symptoms and our time slips by when we can save the man. I think the greatest value of this paper is in emphasizing the fact that we must make diagnosis early.

Early operation in intestinal obstruction carries with it a very slight mortality. If we can make the diagnosis early before the damage is done, these patients will all get well. That was a remarkable case of the boy with a gangrenous obstruction brought from 75 miles away. I want to congratulate Doctor Shands on his splendid surgical judgment. The trouble is we are so anxious to do everything that we do not know when to quit. It takes good judgment to know when to put on the brakes. We operate on patients with the primary object of saving their lives. Whatever is the best method to accomplish that is the right method. It looks bad to the family to say, "This boy should not be operated for another two or three weeks," they want him fixed up right now—so we are inclined to finish the job the first time, and that is a mistake.

Dr. Julius Crisler (Jackson): I also want to congratulate Doctor Shands on this paper and on the beautiful results he obtained.

We all know that in acute obstruction the toxemia is what produces death, and it comes on very quickly. As Doctor Darrington has said, the earlier we get the patient the quicker relief is given, and the higher percentage of cures we will have. In all cases of obstruction of the intestines it has been my custom for the past twenty years to immediately open the intestine and allow a discharge from the proximal end of the bowel before I break the obstruction, because the distal end is very hungry and thirsty and the patient will sometimes die from toxemia from that end of the bowel.

In doing a resection from end to end I find that if I make the resection or division of the intestine this way (illustrating on blackboard) I will have a result like that; but if I make the division this way and then bring these ends together, I will have a larger point than I had before, and will not have a secondary obstruction.

One other point: McCallum and Dixon have

shown by experiments on animals that in cases of obstruction, especially high in the intestinal tract, there is marked lowering of blood chlorides and marked increase of blood urea, and a great increase in the carbondioxid carrying capacity of the blood. They recommend that salt solution be given in these cases to bring up the lowered blood chlorides either before the operation or if the patient is received in good shape, during the operation—that more cases will get well than if this is not done.

Hayden, of St. Louis, experimented on dogs. He took several sets of the same size and approximate age, and ligated the intestine. To one set he gave normal salt solution daily, and in the other set he used plain sterile solution by hypodermoclysis. The dogs given the normal salt solution lived 23 to 28 days with the obstruction; the dogs given sterile water lived three to four days. That is a point we must remember, that ordinary salt solution should be given by drip and by needle. The doctor said he used soda and glucose. I believe, after this, however, he will use salt and glucose.

Dr. S. H. Hairston (Meridian): The most important part of this discussion was touched on very lightly by Dr. Crisler. The surgical part of the treatment has been worked out about as fine as it can be, but the most important part is to combat the toxemia that is already present in these cases. Your attention now is directed away from the surgical end of it, and all of our investigations are to determine the nature of this toxemia and how to combat it. We do not know what it is. It is generally agreed that it is a chemical compound, but the exact nature has never been worked out. We know that this toxemia causes a marked destruction of the tissue protein of the body and nitrogenous bodies are formed. You may say it is due to faulty elimination through the kidneys, but if you will examine the output of same you will find that they are not at fault. One principal feature noticed in these cases is a decrease in the chlorides in the blood and also in the urine, and, if you introduce normal salt solution in the vein or in the tissue, you will do these patients an immense amount of good. This is about the only step forward that has been made in the treatment of these cases, and the surgical end of it has been worked out as fine as possible. The amount of normal salt solution is about fifteen grams to every two and one-half pounds of body weight. This is given in frequent intervals until the urine and blood show normal chloride contents.

There is one method that I have adopted, lately, that has given me excellent results. This was reported by Matas in the *Annals of Surgery*. This is known as intravenous drip, that is, by constantly dripping the solution into the vein, using sixty to eighty minims to the minute. In some cases this can be kept up for several days. In my hands this procedure has saved several people that I feel quite sure would have ended fatally.

Dr. J. G. Gardner (Columbia): One point I wish to stress in the doctor's paper and that is that the surgeon needs the co-operation of the family physician in getting these cases early. The mortality in early cases of intestinal obstruction is, and should be, very low; but in the late cases, where they have a profound toxemia, it is very high, no matter what method you use.

In regard to surgery, there is one point I wish to mention that I have used with great satisfaction in cases of dynamic ileus after operation, and that is the use of the duodenal tube. In all

our cases of dynamic ileus we introduce the duodenal tube through the nose. It drains the bowel just the same, or very nearly the same as opening the gut and putting in an irrigation catheter. Besides, these patients are extremely thirsty, and in that way they have the pleasure of drinking all the water they want. Of course, it runs out through the tube, but they have the satisfaction of drinking cold water. You can leave it in all day or all night, or as long as you need it, and in our cases it has reduced having to go into the abdomen for drainage.

Dr. W. E. Sistrunk (Rochester, Minnesota): This certainly is a very important subject, and I heartily agree with Doctor Shands in all that he has said. I feel that early diagnosis is, of course, the important thing in intestinal obstruction, and that the mortality depends very largely upon the duration of the obstruction. I think that we are often justified in exploring the abdomen where obstruction is suspected, even in the presence of negative findings, in order to reduce the mortality that comes when we wait long enough to be sure that obstruction is present. It seems to me clinically that with all the signs we have when it comes to differentiating between gaseous distention and obstruction, that cramps plus vomiting is very suspicious. The cramps are very important. If we have a patient who shows symptoms of this sort we never hesitate to explore, even though the findings are negative. With gaseous distention we are not so likely to have cramping pains as in acute obstruction.

I am sure Doctor Shands is right in advising avoidance of resection or any radical operation in obstruction. I think if we can enter the abdomen under local anaesthesia, or very light gas anaesthesia, and put in a tube and relieve the obstruction, more can be accomplished and more safely than by an other method.

It is necessary to examine enough to make sure that gangrene is not present, but in early obstruction if something can be done to relieve the obstruction without being radical, that seems the best procedure. Of course, obstruction lower in the sigmoid and upper rectum can exist for a long time without affecting the patient, and without much evidence of toxemia, and in those cases we oftentimes do some operation in order to diminish the chances of infection.

I think if one point should be driven home it is early diagnosis, plus the simplest thing that can be done to relieve the obstruction.

Dr. H. R. Shands (closing): I had hoped that some of the men would express themselves on the question of the two or three-stage operation in cases of gangrene. I take it they agree with me. However, I can state that around Jackson quite a number of my friends have been in the habit of doing the one-stage operation, and that most of them have gotten away with it very well; but I do believe the two or three-stage operation is much the safer plan.

In regard to saline solution, it is our practice to give it during the operation by hypodermoclysis, repeated often afterwards. I am sure there is nothing that has contributed more to our better mortality in cases of acute intestinal obstruction than repeated use of hypodermoclysis several times every 24 hours.

I think the point Doctor Hairston made in regard to the intravenous drip is excellent. I have heard of it, but have not used it. Hypodermoclysis hurts some, and if it is no trouble to give the intravenous drip it is a most valuable therapeutic agent. I know the giving of an in-

travenous infusion is not to be compared with hypodermoclysis, because in a large percentage of intravenous infusions the patient gets a chill. They do not get a chill with hypodermoclysis.

I did not go into the toxemias. There is not much in the literature regarding the bloody serum found when there is gangrene. You all know that in strangulated hernia, strangulated cyst, gangrenous bowel, or torsion, you get a bloody serum, and I think when you open the abdomen in acute conditions and find bloody serum you have a serious condition, and in chronic cases you are likely to have a malignant condition.

### SPINAL CORD TUMORS, THEIR DIAGNOSIS AND TREATMENT—REPORT OF CASES\*

JAMES T. NIX, M. D.

NEW ORLEANS.

To the inexperienced, symptoms are often misleading. Irritation or pressure on the posterior, sensory or anterior, motor roots may give rise to the most varied, complex and confusing syndrome. Vague, indefinite, abdominal or thoracic pains, disturbances of sensation, weakness of muscle groups, back pains, abdominal pains, bladder, rectal, or sexual irritability, impairment or loss of function, unsteadiness of gait, incoordination of muscle action, disturbed tactile pain and temperature senses, singly, in groups or combined these unusual manifestations may appear and lead one to erroneous conclusions.

The insidious onset and slow steady progression of symptoms without improvement provide ample time for numerous consultations and often numerous diagnoses.

Neuralgia, muscular rheumatism, neuritis, spinal sclerosis, tabes, each, in turn, is labeled the offender. There follows a vigorous therapeutic battle. Iodides, salicylates, colchicum, and a long list of pharmaceuticals are employed.

After a thorough trial, there is no abatement of suffering, so a call is sounded for the specialist. Dental forceps are first applied, and later, usually, the tonsil snare.

The disease goes on. A surgeon is called, and after careful analysis and much study he believes the symptoms to be due to a surgical problem, not recognized before, possibly a moveable kidney, displaced or prolapsed uterus, or other removable or correctable pathology. The appropriate operation is performed. Temporary relief may follow the rest in bed. One month later the patient still complains. Two months

later conditions are worse. There can be but one conclusion, our patient must have an erratic or diseased mind, we are dealing with a hypochondriac—a “neuro”—a psychopath. Give bromides, valerian, luminal.

Do not consider this the far cry of a hypothetical case—which seldom, if ever, happens. Unfortunately it represents a truism of today, not at all confined to our community alone, but existing wherever sick people are to be found. No greater authorities can be given to substantiate this view than C. A. Elsberg, New York, and A. D. Adson, Rochester, Minn.

Tumors of the spinal cord and its membranes are not infrequently met with. In our own experience we have had two cases in the past year, and I am satisfied that in times previous some have passed through our hands undiagnosed.

In type they are extra-medullary, without the cord, and intra-medullary within the substance of the cord. The extra-medullary is the most common, occurring in 63 per cent of the cases. They are both accessible to surgery, the extra-medullary being more readily so.

Pathologically they are classified as psammoma, glioma, sarcoma, lipoma, endothelioma and those tuberculous in type. The benign ones are entirely removable by surgery, and claim by far the largest number of spinal tumors.

As to location in the various sections of the vertebral column the following prevails, dorsal 73 per cent, lumbar-sacral 21 per cent, cervical 6 per cent.

Dorsal tumors represent the largest number, and fortunately so, for at this site of the spinal column, the cord is easiest to approach. The posterior muscles are not so large, the spines are smaller across their base and the laminae are not as thick as those of the lumbar vertebrae.

Symptoms: Root irritation gives rise to the principal symptoms. Numbness, burning, and the most exquisite shades of hyperesthesia and parasthesia are often registered. At times the skin is so sensitive that mere contact with anything causes extreme discomfort; clothing can scarcely be borne, and even the lightest bed covering causes intense suffering. These hypersensitive areas are usually fixed in their location and correspond with definite precision to the distribution of spinal nerves.

Bladder and rectal symptoms may be among the first or last to appear. In complete paraplegia we have always incontinence of urine caused by an overflow of

\*Read before the Orleans Parish Medical Society, September 22nd, 1924.

the bladder and constipation or incontinence of feces. Areas of anesthesia are common and often diagnostic. They point to relative cord segments.

Hyperesthesia over the area of the posterior nerve root and especially above the level of the other sensory disturbances is frequent, and occasionally such is the only localizing sign of spinal cord tumor.

Sensory disturbances are often slight and can only be elicited by the most careful neurological examinations. Motor disturbances are equally as pronounced. Weakness and stiffness of the arm or leg or of a special group of muscles, greatly exaggerated reflexes, muscle atrophy the result of deficient nutrition, loss of power and disuse, all are expressions of irritation of the anterior or motor roots of the spinal cord. Muscle jerking is common, the legs suddenly giving way while walking, or the hand while holding something. This is often more pronounced at night, while the patient is at rest or asleep, especially if the neoplasm is in the dorsal or lumbar segments. As the tumor grows, causing much pressure on the cord, all reflexes are lost.

"There is no spinal disease in which there is more spasticity and greater exaggeration of reflexes than in the new growths causing pressure on the cord."

*Diagnosis:* The following should be routine.

(1) X-ray of spinal column to eliminate Pott's, malignant, or other osseous disease, injury or pathology from without causing pressure on the cord or its coverings.

(2) Spinal puncture noting the pressure of fluid and its physical, biological, and chemical properties.

(3) Chemical and microscopical examinations of the spinal fluid. A request should be made for Wassermann reaction, cell count, globulin content, and color findings.

(4) Careful neurological examination and consultation with a competent neurologist to definitely fix the location of disease.

(5) Before surgery or other therapy is attempted there should be a complete general examination, including a study of the blood and excreta.

(6) A most detailed history should be taken, accounting for the first appearance of symptoms and their chronological order of progression. A history of short duration usually means an irremediable condition.

(7) If the gravity of the case justifies and the diagnosis cannot be cleared up otherwise, an exploratory laminectomy should be done.

*Operative Technic:* The operative principles employed by us were the same as those practiced in all of our large neurosurgical clinics. They can be found in any standard text book on surgical technic.

*Post Operative:* At first there is an increased intensity of all symptoms which lasts four or five days, during which time moderately high fever, 101 to 103 degrees, may set in. From there on, however, convalescence is very rapid, and after two or three months there is a complete restoration of function. Beside the usual measures of post operative care, especial attention should be given to the bladder and rectum, emptying them at regular intervals if necessary. Avoid the use of hot water bags, for the skin, already dulled in sensation, may be severely burned before being discovered. Morbidity following the operation should be nil.

*Mortality:* Horsely reports twenty successive operations without a death. Krause gives 26 with a mortality of 37 per cent. Hart collected records of 92 operations with a mortality of 47 per cent. Elsborg has operated on twenty-two extra-medullary spinal tumors without mortality from the operation. Our personal experience is very limited, though up to the present time we have had seven laminectomies, without mortality from the operation. The high death rate given by Krause and Hart is not the result of laminectomy but in all probability can be accounted for by serious complications which obtain when the diagnosis has been too long delayed, or the tumors are of such types as make them irremovable, or removable but at great risk of life.

*Case Reports:* In both of our cases physical examinations and tentative diagnosis of spinal cord tumors were made by Dr. J. M. Perret, with Dr. Cazanavette in consultation, and definite localization of the tumors was established.

Case No. 1—Mrs. B. first appeared at our clinic May 10th, 1923, at that time complaining of stiffness in neck and burning pains in left shoulder. She had a "knocking cough" as she described it, dizziness, weakness, vertigo and indefinite pains over entire body. Physical examination showed her to be a very sick woman. B. P. 210/110 P. S. P. 25 per cent evidence of arterio sclerosis and myocarditis. At this time we did not recognize the presence of a spinal tumor and no symptoms pointed to one. She was kept in the hospital for a month and sent home without improvement. From this time on, however, the lower limbs began to lose strength, and

evidences of spinal cord tumor progressed with great rapidity. Because of the precarious condition of her general health surgical interference was delayed. Dr. Cazanavette was called in consultation September 3rd. His report follows:

I first saw Mrs. B. on the morning of September 3rd, 1923. She complained of having had for several months past, sensations of weakness and numbness in both lower extremities. There had also been considerable twitchings and at times there was bending of the knees up to the chest. During the past two months all these symptoms, together with a loss of control of the bladder and rectum, had been much worse. At the time of examination she was on her back in bed and unable to move the lower extremities. There was also complete loss of control of the bladder and rectum. There was complete paraplegia. There was exaggeration of all the deep reflexes, Babinski, etc., and marked hypertension of the muscles of the lower half of body and lower limbs. When examined one week later there was noticed much more relaxation in the muscles of the lower limbs, which were still completely paralyzed. The deep reflexes were diminished. No Babinski. The lower part of the body was immobile. The line of sensory demarcation as found on previous examination extended as far as the level of the ninth dorsal segment. All forms of sensation were completely abolished below that line. The above history and symptoms pointed to a neoplasm involving the meninges and the cord at about the level of the ninth dorsal segment and below that point.

Operation: Laminae of 8th, 9th and 10th, dorsal vertebrae removed and tumor located. It filled in completely the spinal canal and involved intimately the cord and its coverings which with the tumor formed a firm inseparable mass. It would have been impossible to remove the tumor without removing a corresponding portion of the cord, however, a small section was removed, and microscopic examination declared it to be a gliosarcoma of the cord. The operation was done under local anesthesia with very little discomfort and no post-operative shock. Patient left the institution in ten days and lived two months, death being suddenly precipitated by Chronic Interstitial Nephritis, the patient dying in a uremic coma with complete suppression of urine.

Case No. 2—Mrs. M. History of present condition is one of insidious onset and slow development. She had been treated for a wide diversity of conditions since the trouble started about two years ago. One year ago she was advised that a pelvic operation would probably cure her, and she submitted to it, but no relief followed. She appeared at our clinic October 25, 1923. Physical examination revealed no evidence of organic disease except a transient albuminuria. Heart, lungs, kidneys, blood pressure, and blood examination were negative for pathology.

In reviewing her history, one noted especially a definite characteristic syndrome, evidencing spinal cord disease. Dr. Cazanavette was called in consultation. The following is his report:

I first saw Mrs. Murtagh in my office on November 7, 1923. She complained of an inability to walk with safety as she felt a great weakness in the right lower extremity accompanied by a burning sensation in the right foot and leg. She stated that while walking this leg would suddenly become weak and she would fall to the ground. The left lower extremity did not seem to bother her at all save for a slight weakness at times. This weakness of the right leg and the burning

sensation therein she had experienced since the month of February, 1923. There was an indefinite sensation of soreness in the limb at that time; also she had no disturbance in the control of the bladder and rectum, but for years had to have recourse to laxatives because of costiveness. Often it became necessary to flush the bowels. There was a feeling of tightness about the right knee and at times she had involuntary movements on that side. On examination there was apparent difficulty in raising the right thigh and knee and weakness in some movements of the right foot. Sensation was not appreciably affected save for an area of hyperesthesia about the right lumbar region, which extended to the twelfth dorsal segment and higher. The K. J. reflex was exaggerated on the right; there was also present on this side a Gordon, a Babinski, and an Oppenheim, and an Achilles reflex. Subsequent examination three days later, showed an increase of the above symptoms, together with more intense sensation of burning and pain in the right limb much worse at night. An area of anesthesia on the dorso-lumbar region was marked.

Diagnosis: Spinal cord tumor near level of 10th, thoracic vertebra.

Operation: Spine and laminae of tenth dorsal vertebra removed but tumor was apparently higher up. The ninth and eighth were also removed and the tumor located at upper border of ninth vertebra, between it and the eighth. Tumor was shaped like a butterbean and about the same size. It was attached to the inner left postero-lateral surface of the dura, and not adherent to the cord. Patient made an uneventful recovery and is now apparently cured and entirely well.

Conclusions: (1) Mistakes in diagnoses are common, as the symptoms are so varied and misleading.

(2) By keeping alert as to their possible presence and carefully consulting over every doubtful case, few if any will pass undetected.

(3) Rapidly growing tumors are usually non-surgical.

(4) Slow growing tumors usually can be entirely removed.

(5) Benign tumors represent the majority of these growths, the most common type being extra dural and a dorsal area of vertebral column.

(6) Laminectomy simply requires development of technic and should be no more serious nor difficult than other operations of major surgery.

(7) Syphilis may cause or coexist with any spinal disease, therefore, whenever in doubt push anti-syphilitic therapy.

A delayed or incorrect diagnosis means the prolonged suffering of helpless invalidism, physical torture, mental anguish. Ever constant and just behind are the dark shadows, chilled air and the dread still of approaching death. On the other hand, an early and correct diagnosis usually means a cure, restoration of function, health and

activity, and with these a return of happiness.

Often the control is within our hands. Which shall it be?

#### DISCUSSION

Dr. Urban Maes: I have very little to say because I have had very little experience with spinal cord tumors, and have seen none except those that have been referred with the diagnosis already made.

It strikes me that the most important consideration is diagnosis. Second in importance is the localization of the tumor. I do not think that the average run of doctor is justified or qualified to make any such special examination. Exploratory laminectomy sounds very well, but we can explore the whole abdomen and we cannot explore the whole spinal cord. When we recall Elsberg's early experience, with all the data, paraphernalia and expert help that he had at hand, of only finding tumors in seventeen per cent of his laminectomies, it does look as if diagnosis should be determined when possible before exploratory localization. Elsberg's statement that his laminectomy findings proved a positive diagnosis in only seventeen per cent, leaves us eighty-three per cent error, consequently it seems to me that before a laminectomy is performed some positive justification should be found.

Dr. Nix spoke of the technique, and, I believe, spoke of it too lightly. I regard laminectomy as an extremely difficult operation—in fact, regard it as the most difficult operation I have ever performed. My most recent case died on the eighth day with very high fever. We had localization that had been pretty well worked out by Drs. Van Wart & Holbrook and, as I remember, a very high dorsal or low servical—tumor was suspected. The diagnosis was confined. We exposed the cord and all we could find was a rather localized enlargement of a great plexus of veins in this particular region. I enlarged my laminectomy by going up and coming down a certain distance and was able to follow these varicosities. Laminectomy revealed only this telangiectasis, which may be similar to the case reported by Frazier.

Despite rather accurate suture of the dura cerebrospinal fluid began to be noted on the 6th day. This was accompanied by very high fever and the patient died on the eighth day with temperature of 108 degrees. I wonder whether anything had been done to the meninges or cord. Local autopsy revealed nothing, but apparently the high temperature had something to do with the loss of cerebrospinal fluid.

The important facts are, first of all, diagnosis; second, localization, and third, we have got to be rather particular about saying this is technically a simple operation. I think laminectomy is a very difficult operation, and one that requires extreme caution.

Dr. L. L. Cazenavette (New Orleans): When I first met Mrs. M., at my office, the patient you have just seen walking across the hall, she complained of the symptoms referred to by Dr. Nix. What I recall distinctly and particularly is that her complaint consisted of a pain, localized, in the lumbar region, of a sudden loss of power in one limb, the limb which was weak and subsequently became paralyzed. She experienced peculiar sensations in that limb, also. She walked with great difficulty and stated that whether in the act of standing or walking the affected limb

would suddenly give way under her and cause her to fall. She weighed more than she apparently does today, being then rather stout—nevertheless, she had marked weakness in one limb with pain in the lower lumbar region, more to one side, symptoms of sensory manifestations (unilateral) referred to as marked paresthesia. I do not now recall the exact state of the reflexes. The course of these symptoms, with the presence of localized pain, paresthesia, and partial paralysis of the limb, naturally suggested the possibility of a spinal cord tumor. When I saw her again, three weeks later, at the Hotel Dieu, she had become paraplegic and experienced sudden involuntary and uncontrollable jerking in the lower limbs; all of which pointed towards increased pressure on the cord. The diagnosis of tumor was still more evident, and I am pleased to say that we were able in this case to localize the tumor in the very region where it was found.

Regarding the symptoms pointing to diagnosis of spinal cord tumors, I wish primarily, especially in infra-medullary tumors to the existence of pain in a definite region of the back, usually unilateral, or limb, this pain being of a root character (by root pain meaning the distribution of the pain along the spinal segmental region of the body, and not along any nerve distribution.) Now, there may, or may not be other sensory disturbances such as parasthesia and anesthesia. But the localized pain, gradual weakness of a limb, or part of a limb, together with symptoms of irritation, such as rigidity and sudden twitchings of the muscles, symptoms pointing usually to meningeal irritation, should open our eyes to the possibility of a spinal cord tumor. Tumors pressing on one side of the cord may give symptoms of a modified Brown-Sequard's syndrome, which, you will recall, is spastic paralysis with muscle and partial tactile sense on one side and loss of tactile sense and pain and temperature sense on the other. Of course, if the growth encroaches more upon the cord, you will have symptoms of complete paraplegia.

I believe that if we were more on the alert in these cases and recall the possibility of spinal cord tumors giving rise to pain, localized in this way with (lumbar) other accompanying symptoms, we would recognize these conditions more frequently. If a careful examination of the patient reveals the possibility and probability of the presence of a spinal cord tumor, I believe that the surgeon is justified in making a laminectomy and explore the region of the most probable location of the tumor.

In closing, I wish to congratulate Dr. Nix on the result obtained in this case. His patient is now apparently cured and with control of her limbs.

Dr. Nix (closing):

I would like to say that I do not think an operation of these conditions should be attempted without first a consultation with a capable neurologist. Of course, there is no question that diagnosis and localization are most important. As to the question of technique, there is nothing in my work which is not described in any of the large text books on surgical technique. I have had six laminectomies, and believe that the last two have been easier to perform than the first two. Laminectomy, after a man has done a few, is certainly easier than when he first starts. Dr. Maes is right in his assertion that laminectomy is a most difficulty undertaking; unquestionably one of the hardest operations I have performed.



Dr. H. B. Gessner (New Orleans): I would like to put a question to Dr. Nix. In the second case he reported, after the excision of the tumor, did he have any difficulty in bringing the edges of the dura together? It must be extremely hard to approximate these inelastic edges, and I should like to know what his experience was in that respect.

In answer to Dr. Gessner's question, I would say that this tumor was a psammoma, about the size and shape of a butter bean and apparently pedunculated. It was attached by a small pedicle to the posterior aspect of the inner surface of the dura. It came off without difficulty, and to make sure it was entirely removed a small piece of dura 1-8 of an inch long and 1-32 of an inch in width was excised and was easily brought together by an interrupted suture.

### CASE REPORT OF TUMOR INVOLVING CAROTID SHEATH PRESENTING SOME INTERESTING DIAGNOSTIC PROBLEMS\*

J. E. KNIGHTON, M. D.  
SHREVEPORT, LA.

The case report which I present herewith is that of a tumor which apparently developed within the carotid sheath and produced rather alarming symptoms by pressure upon the vagus nerve.

Case reports of tumors of the carotid gland or carotid body are comparatively rare in the literature, and among those reported, very few have exhibited the symptoms which were present in this case, which came under my observation first on April 11, 1923.

The patient, W. E. H., male, aged 58, occupation insurance business.

Chief complaint: Attacks of fainting, during which consciousness was completely lost.

Family history: Irrelevant.

Personal history: Has had the usual diseases of childhood and early in life had several attacks of malaria. Has never had venereal infection of any kind. No other illness of importance until in September, 1922, had dengue fever of rather severe type. Soon after this illness, he resumed his usual work, and on returning home in the evening from his office he had his first fainting spell while sitting in the street car, reading the afternoon paper. This came on suddenly without warning, and on being taken off the car by friends, promptly regained consciousness and felt as well as usual. It was stated by friends present that there were no convulsive movements and no rigidity. Some time during the month of March, 1923, patient had a mild attack of what appeared to be influenza, being confined only a few days. Following this, he had second fainting spell practically the same in character as the one described above. He was seen at that time by his family physician, Dr. F. J. Frater, through whose courtesy I am indebted for the privilege of seeing the case.

Patient stated that following recent influenza

attack he had felt some weakness and depression and had slight disturbance of digestion. Appetite was good. Bowels inclined to be constipated. Weight stationary. Patient had noticed small lump in left side of neck for the past fifteen years which had increased in size during the past few years.

Physical Examination—General appearance: Well developed, stout type and well nourished. Mouth and throat: Fairly healthy except considerable dental work and loss of several teeth, and slight pharyngeal congestion. Chest: Full and equal expansion of both lungs and no abnormal signs on percussion or auscultation except an occasional whistling rale. Heart: Left border extending slightly to left of nipple line; right border about midsternal line; apex in fifth interspace; no murmurs. Abdomen: No hepatic or splenic enlargement. No specially tender areas.

Deep and superficial reflexes normal. Pupils react normally to light and accommodation. No general glandular enlargement. No marked general arteriosclerosis. Blood pressure 110-180.

There was a visible and palpable enlargement in the left anterior triangle of the neck being just below and slightly posterior to the angle of the jaw.

X-ray examination of chest indicated that heart was about normal in size and that the lung fields were clear with the exception of fibrosis about roots of each lung.

Laboratory examinations showed red, white and differential blood counts within normal limits, and urine normal.

Patient asked me if I thought this enlargement in his neck played any part in the production of the fainting spells; I replied that I did not, as I was inclined to associate these attacks with weakness incident to dengue in the former instance and to influenza in latter. Accordingly, I advised rest in bed and gave a prescription composed of digitalis and nuxvomica.

This advice was followed, but to my surprise, it was only a short time until another attack similar to those mentioned above appeared. Under the impression that more digitalis was indicated the drug was increased to fairly full doses. Following this the syncopal attacks became more frequent. On several occasions, Dr. B. C. Garrett, who was a next-door neighbor, was hurriedly summoned during these attacks. He stated that there was no pulse or heart action perceptible for a short time, and that artificial respiration was resorted to for resuscitation. Consciousness usually returned suddenly and the circulation was good immediately following these attacks, and patient was comfortable. There was no evidence of convulsions associated with any of these attacks. Inasmuch as the condition seemed to have been aggravated by digitalis, it occurred to us that the tumor in the neck was probably making pressure on the vagus and in that way precipitating these attacks when the patient was in certain positions which increased the pressure.

With this idea in mind, on one occasion steady pressure was made on the tumor with one hand while observing the radial pulse with the other hand. Suddenly the pulse which had been regular up to this time, flickered and almost stopped completely, but returned to regular rhythm immediately on removing the pressure. This observation justified the diagnosis of syncopal attacks due to mechanical pressure on the vagus nerve by the tumor.

\*Read before the Louisiana State Medical Society, Opelousas, April 22-24, 1924.

Surgical treatment was advised, and on May 6th, 1923, the tumor, about the size of a medium walnut, was removed by Dr. J. C. Willis, Sr., and Dr. B. C. Garrett. This tumor was situated in the carotid canal about the point of division of the common carotid into the internal and external carotids. In order to remove the tumor, the external carotid had to be ligated as it passed over the outer surface of the tumor. This vessel was found to be very friable from pressure, and the ligature had to be placed some distance from site of tumor to prevent cutting through walls of vessel by ligature. The patient made an uneventful recovery from the operation, with the exception that the recurrent laryngeal nerve having been injured or severed, he has suffered complete loss of voice. However, he has not had a single fainting spell since the operation, and he is in robust health today with the exception of the loss of his voice.

He accepts the condition gracefully, and says that he is thoroughly satisfied to have given up his voice in order to get rid of a condition that was completely incapacitating him for his business.

The tumor evidently developed in that poorly defined tissue known as the carotid gland or carotid body. The pathologists who have examined the tumor state that there is nothing in the character of the tissue to suggest malignancy and as almost a year has passed since the operation and there are no indications of recurrence, it seems probable that it was in no sense malignant.

There are reports of tumors of this structure known as the carotid gland or carotid body scattered through the literature, but the only reference that I have seen suggesting a parallel case is found in Osler's "Principles and Practice of Medicine," page 1051. In discussing the effect of irritation of the vagus by pressure from tumors or other causes, he mentions a man who could die at will by making pressure at the proper point in his neck.

In the December number of *Annals of Otolaryngology, Rhinology and Laryngology* there is reported a case of tumor of the Carotid gland with Stokes-Adams Syndrome.

### LYE STRICTURES OF THE ESOPHAGUS WITH A PLEA FOR LEGISLATION\*

R. C. LYNCH, M. D.

NEW ORLEANS.

Last year in a general discussion of the treatment of esophageal lesions I stressed the disastrous results of lye ingestion. I propose this year to review briefly the pathology and treatment.

KOH Potassium Hydroxide is Vienna paste; NaOH Sodium Hydroxide is caustic soda or concentrated lye. These two caus-

tic alkalis are used daily in many households for cleansing, bleaching and washing purposes, and though sold in concentration up to 98 per cent are caustic to a dilution of 10 per cent.

Lye is a white marshmallow looking pasty substance, and is inviting to eat, especially to children. When taken in the mouth lye does not at first burn intensely as do other caustics like sulphuric, carbolic, nitric, hydrochloric acids, ammonia, etc., and for this reason is swallowed at least part of the way. The burn is usually just below the cricoid or on a level with the clavicle, should the lye slip farther down it is held at the crossing of the right main bronchus and then at the cardia. In the cases where sufficient is swallowed to burn through the esophagus, death occurs in eight hours. The greater majority, however, burn to sufficient depth to cause necrosis of the superficial and sometimes deeper layers of the esophagus, causing at first great pain and temperature reaction and little difficulty on swallowing, but as contraction of the burn takes place the difficulty in swallowing increases until stenosis becomes more or less complete; then marked emaciation, water hunger, starvation and, unless a gastrostomy is done hurriedly but carefully, death will occur or the contraction will narrow down to permit only liquids to go through, and, unless this condition is corrected, death occurs usually from some intercurrent condition. In either of these states we see the poor little unfortunate patients and they must now undergo a period of esophageal dilation at first daily, may be for months, then tri-weekly, then weekly, finally monthly, and maybe if all has been well for a period of six months to two to five years they are permitted to eat soft foods, and they must finally grow well or the hole in the esophagus must not only be stretched large but it must actually grow large enough to permit the eating of solid food. I am sure but a few of you and only a victim and its mother know what this means. Pain, gagging, the fiendish craving for solid food and one's inability to satisfy it, lowered vitality as a result of the stricture, intercurrent diseases either in the patient or other member of the family which prevents regular treatment. Loss of time in this way interferes with progress, and much that has been gained is lost, and so these little unfortunates prolong their agony and torture. I have always wondered why the cruelty of middle ages did not more often employ lye—the slow death from lye.

\*Read before the Louisiana State Medical Society, Opelousas, April 22-24, 1924.

The history of these cases are all alike—Lye in powder or liquor or paste is left either on the floor or table within reach of the unfortunate—its color, consistency are inviting, and a good taste is all that is necessary. Poor mother or servant didn't know lye was poisonous—the label shows no word or sign of warning. If its nature and its danger were put on signs like Coco cola or U-Need-a Biscuit, every mother's family would know it and the cases would disappear.

Education of the public is absolutely essential. This can best be started by labeling the container "Poison" to show its nature. A mother will at least know what she is purchasing. The skull and cross bones and the red poison label are as widely known as the Coco cola sign, and these displayed prominently on the container will help our little unfortunates immensely.

A druggist must label his poisons as above but a grocer next door can sell one of the worst type with no label at all except that which says will not injure the most delicate fabric. Do you think this is fair?

At the San Francisco meeting of the American Medical Association, June 21st, 1923, the unregulated sale of lye was regarded as a national menace, and a resolution by Dr. Burt R. Shurly, delegate from the section on Laryngology, Otology and Rhinology, was adopted by the House of Delegates.

"Whereas, The domestic use of concentrated lye and other caustic alkalies and of corrosive acids, in ignorance of their dangerous properties and treatment in case of accident, is a not infrequent cause of death and of prolonged, distressing and incurable disability, particularly among children; and

"Whereas, In the judgment of this house the adoption of suitable methods of packing, labeling and distributing such substances would materially diminish the danger; and

"Whereas, Effects to bring about the adoption of such methods by the voluntary action of manufacturers and distributors have given no prospect of success, be it

"Resolved, That it is the sense of the House of Delegates of the American Medical Association, in convention assembled, that in the interest of public health and safety, the packing, labeling and other distribution of concentrated lye and of other caustic alkalies and of corrosive acids should be regulated by law; and be it

"Resolved, further, That the Board of Trustees be instructed to take such action

as may be necessary to procure the enactment of such federal and state laws as may be necessary to effect such regulation."

The states of Pennsylvania and Florida have already passed such a law, and the following, a copy of the Florida law, is appended for your approval or for adoption by our state legislature:

"Be it Enacted, by the State of Louisiana:

"Section 1. That on and after the first day of January, one thousand nine hundred and twenty-five, it shall be unlawful for any person or co-partnership or corporation to sell at wholesale or retail within this State any caustic acids or caustic alkalies or preparations 'containing such acids or alkalies' intended for household use, including preparations ordinarily described as or called "Lye," without affixing to the bottle, box, vessel, sack or package containing the same a label printed or plainly written containing the name of the article, the name and place of business of the manufacturer, seller or distributor of such household acids, alkalies or preparations thereof, and in addition the word "Poison," which shall conspicuously appear thereon in red capital letters not less than twenty-four-point size or which shall be affixed thereto as a sticker conspicuously placed.

"Section 2. The word 'Caustic' shall within the intent and purpose of this act be construed to mean any 'acids or alkalies in liquid or powdered form of' preparations thereof, or containing free or chemically, unneutralized hydrochloric acid in a concentration of ten (10) per centum, or sulphuric acid in a concentration of ten (10) per centum, or nitric acid in a concentration of five (5) per centum, or carbolic acid (Phenol) in a concentration of five (5) per centum, or oxalic acid in a concentration of ten (10) per centum, or acetic acid in a concentration of twenty (20) per centum or hydrochlorous acid (calax Chlorinata bleaching powder or chloride of lime) in a concentration of one hundred (100) per centum or potassium hydrate (caustic potash Vienna paste pearlsh potassa carbonas) in a concentration of ten (10) per centum, or sodium hydrate caustic soda (concentrated lye) in a concentration of twenty (20) per centum, or silver nitrate (lunar caustic) in a concentration of five (5) per centum.

"Section 3. Any person or co-partnership or corporation violating Section One of this act is guilty of a misdemeanor, and upon conviction shall be sentenced to pay a fine of not more than one hundred dollars

and the costs of prosecution, or imprisonment of not more than 90 days.

"Section 4. This act shall take effect upon its passage and approval by the Governor."

Dr. Dean, of the Iowa State University, has called attention to the economic situation and the cost to the State by the hospitalization of the lye stricture cases in addition to the large number who are invalidated for life and incapacitated for self-support. We have seen twenty cases in the last two years at the Eye, Ear, Nose and Throat Hospital in New Orleans.

Have you ever seen or do you know of an individual growing to old age with a gastrostomy? No. They all die young.

It is the rarest occurrence to re-establish normal swallowing in the case of a complete stricture of the esophagus. I know the histories of five cases, two of my own and three outside—all died in an attempt to re-establish a pathway. I know of three more in which no attempt was made. One is dead from other cause, two are living, but how? They may as well be dead.

Won't you pass a resolution memorializing the Legislature of the State of Louisiana to pass a bill demanding the proper labeling of caustic acid, caustic alkalies and preparations thereof, and mineral or chemical salts intended for household use, including preparations ordinarily described as or called "Lye," and providing penalties for the violation thereof?

#### DISCUSSION

Dr. A. A. Herold (Shreveport): This is one of the greatest problems we have in preventive medicine today. While the number of cases of lye poisoning are comparatively rare compared with the total population of a hospital, the quality of these cases make up for the lack of quantity. Anyone who has seen these poor little children suffering as the result of a mistake not altogether their own, cannot help but feel that something should be done. It is not my problem, it is not Doctor Lynch's problem, it is everyone's problem, and unless we all get together on this nothing will be done. We must not leave it to the other fellow. The trouble is that the packers put up a big lobby. They do not want to label their product "Poison" because they say it will restrict their sales. We are not working for the medical profession, but for the public.

Without trying to claim any unusual credit, I wish to say that the minutes of the House of Delegates for April 23, 1923, contain this resolution, that I introduced, and which passed, unanimously.

Dr. V. H. Fuchs (New Orleans): There is one thing I would like to impress upon everybody here today, and that is the absolute need of legislation for this lye question. As I understand it, there are only two states that have such laws, Pennsylvania and Florida. The thing to do is for each one of us to go back to our city and

community and impress the laity with the fact that this is poison material, put out under insufficient labels. Show them the need for legislation to prevent the sale of this material under these conditions. At the present time we have five such cases in my service at the hospital, and that is only one service. These cases vary in time of treatment from eight months to four and a half years.

Doctor Lynch did not go into detail as to the treatment, but there is one thing I would like to mention, and that is absolute condemnation of passing a bougie blindly in these cases. Owing to the number of pouches in the esophagus this is dangerous.

Dr. Dan W. Kelly (Winnfield): I have had one or two patients in the last two or three years from lye poisoning. You see these cases sometimes when you do not think the patient has anything serious, but it is my experience that it is only a question of time until he is dead.

Another point in which lye is doing as much harm to adults as to children, and more, is in the manufacture of home-made drinks. People who sell lye tell me their sales have doubled since the days of prohibition.

Dr. Thos. B. Sellers (New Orleans): Men are sometimes affected by lye. I have in mind a very prominent business man of Tuskegee, Alabama. He drank very heavily of homemade whiskey. Most of us know lye is used in making it. There was enough to give him a stricture of the esophagus about three inches long. It was necessary to do a gastrostomy to dilate the stricture and feed him. A POISIN label, no doubt, would open the eyes of the consumers of homemade brew.

Dr. Oscar Dowling (New Orleans): About two years ago we tried passing a regulation prohibiting the sale of lye unless it was labeled "Poison" with skull and cross-bones, but a howl went up from the manufacturers. Then the American Medical Association took it up in a State-wide way, to see what the action would be in some states. Pennsylvania and Florida have passed acts, and they are being enforced. Now I hope that the American Medical Association will present a bill before Congress in the near future which will require that the word "Poison" be printed in red letters. The manufacturers object seriously to the skull and cross-bones, thinking it will affect the sale of their product.

When Doctor Kelly and I were growing up they did not buy this kind of lye; they burned hickory wood and made ashes, leached them and made lye.

Dr. R. C. Lynch (closing): We have had twenty of these cases in the ear, nose and throat service of the hospital in the last two years. Doctor Jackson says they have fifteen to twenty cases all the time in the Bronchoscopic Clinic in Philadelphia.

Two states have passed their laws—Pennsylvania and Florida. In Florida it took them two days to pass the law. It was presented one day and passed the next, and the Governor signed the bill the third day. I hope we can keep up with that record.

Have you ever seen a case of complete stricture of the esophagus so that nothing could be taken through the mouth? I have. We had five cases; two of them died and the rest are eating through a gastrostomy tube. All these patients die young, perhaps from some intercurrent disease, and they are inefficient as far as their citizenship is concerned.

## ECTOPIC GESTATION\*

V. B. PHILPOT, M. D.  
HOUSTON, MISS.

Ectopic Gestation is pregnancy outside the uterine cavity, and with few exceptions, the developing embryo is in the beginning located in the fallopian tube.

The cause of extra-uterine pregnancy is some interference with the downward progress of the fertilized ovum, fertilization having normally taken place in the tube. This interference is usually brought about by salpingitis, adhesions, tumors of various kinds and malformations, and it is well to have these conditions in mind as diagnostic aid in cases of suspected Ectopic pregnancy.

The varieties of extra-uterine pregnancy are, grossly speaking, tubal, ovarian and abdominal. By far, the majority are tubal, and only in rare instances is the abdominal variety primarily abdominal.

The pathology of Ectopic pregnancy ranges from the developing embryo surrounded by the unbroken tube or sack to the various types of rupture. These ruptures may occur at any stage and may be intra-peritoneal with either moderate hemorrhage, repeated moderate hemorrhage or with profuse hemorrhage. Those with profuse hemorrhage occur mostly between the 3rd and 4th months, and are, of course, regarded as more serious, other pathological classes are tubal abortion, where the embryo with its membranes are extruded from the end of the tube into the peritoneal cavity, rupture into the broad ligament, and abdominal or wandering pregnancy.

The most interesting and important feature in considering ectopic gestation is the diagnosis before rupture with profuse hemorrhage.

Being considered an uncommon occurrence and symptoms of other conditions somewhat similar, ectopic pregnancy is sometimes the last thing thought of, and a safe surgical risk made more or less hazardous.

The chief symptoms of ectopic gestation are:

First—Missed menstruation. The patient previously regular in her menstruation.

Second—Sudden onset of pain, with, or without shock, bloody vaginal discharge after previously missing menstruation, in some cases containing shreds.

Third—Only slight fever.

Fourth—Irregular attack of pain and enlargement of the affected side without corresponding elevation of temperature. This is one of the principal symptoms of ectopic pregnancy.

Fifth—Some of the early signs of normal pregnancy with absence of material in the uterus.

When profuse hemorrhage occurs, which is rare, the patient has all the symptoms of shock and loss of blood, blanched face, cold extremities, rapid and feeble pulse, short and labored respiration, etc. These with the previous history make the diagnosis easy, but too late to handle the case easily. So, it is of paramount importance to make the diagnosis before this time and remove the affected tube.

I have stated that profuse hemorrhage is rare. In doing this I do not mean that rupture of tubal or ovarian pregnancy is uncommon. In fact, I believe more than one-half of these cases are not diagnosed before some kind of rupture. In a series of fifteen cases of my own, all but four had some form of rupture before operation, and in only one case was the hemorrhage so great as to cause death. Nature is wonderful in taking care, for the time at least of most hemorrhages of ruptured ectopic pregnancies, and for this reason we are of the opinion that some of our previous teachings are wrong in advocating surgical interference immediately when the symptoms of rupture occur, especially where the surroundings for abdominal surgery are poor. I believe we will save more cases by treating the case as one of profound shock and handling them with the greatest care, cautiously moving them where an operation can be more safely performed, and allowing them, if possible, to recover from the shock, then removing the trouble by abdominal section.

There are two points I would like to emphasize:

First—Ectopic gestation is probably more common than is usually considered.

Second—That, while it is of great importance to diagnose these cases before intra-peritoneal rupture or abortion occurs, neither necessarily means death at the time, without immediate surgery, and that it is probably better to postpone abdominal section until the patient has recovered from the shock.

I am only presenting in detail one case of Ectopic pregnancy, which was of the abdominal type. Referred to us by Drs. Parkes and Kemp, of Louisville.

The history of this case is as follows:

Patient, colored. Age, 28. Occupation, cook.

\*Read before the Mississippi State Medical Association, Jackson, May 13-14, 1924.

Grandparents lived to be old. Father, 100. Mother, 50. Cause of death unknown.

Present trouble began more than one year before entering the hospital, with slight general abdominal pain, some distention and tenderness over entire abdomen. The condition had grown worse during the past four months. Menstruation more irregular and with pain. The pain resembled labor pains, with bloody discharge.

Past History:

Usual diseases of childhood, never had typhoid fever, or pneumonia, had malaria once or twice during life. Habits and social data in line with the negro race. Patient began to menstruate at the age of 13 years, regularly every 28 days, continuous for three or five days, some Dysmenorrhea, some clots at times, about four months before entering the hospital, menstruation became irregular, painful, scanty at times and very profuse at others, continuing for ten days to two weeks for the last four months. Patient had been separated from her husband 19 months.

Physical findings:

Head, neck, chest, cardio vascular system normal. No trouble with the skin, joints, glandular, neuro muscular system.

Abdomen: Normal shape and size, but distended, tender and rigid, especially in the right side. A well outlined tumefaction could be palpated in the lower abdomen, simulating a pedunculated fibroid tumor of uterus. The tumefaction not well fixed, but not freely moveable. Vaginal showed nothing abnormal.

Pre-Operative: Pedunculated fibroid and appendicitis.

Patient was operated on September 20th, 1923.

Operative findings: A calcified fetus, more or less encapsulated in abdomen posterior to the uterus and in contact with the abdominal wall behind, which we called a lithopedion. Placenta attached to the stomach, and omentum and receiving its blood supply from these organs. A live, full-grown cord connecting the placenta with the fetus.

Just whether this condition was abdominal pregnancy primarily, or an early tubal abortion I do not know. There were no signs of rupture of the tube, and from the history I had reason to believe the trouble had existed in this patient for at least a year. Patient made complete recovery.

#### DISCUSSION

Dr. E. C. Parker (Gulfport): I read a paper before this society eleven years ago here in Jackson, and brought out the fact that in ectopic, when making a bimanual examination by pressing on the cervix you can exclude acute salpingitis because of the excruciating pain. I have never seen a case of ectopic that did not exhibit excruciating pain when you press on the cervix and push the uterus up.

The doctor said nothing about multiple ectopic, and the possibility of ectopic and pregnancy at the same time. We have these cases to deal with, although not very often. Two years ago a confrere of mine called me and said he believed he had a case of ectopic. I examined the woman and the best I could make out it was a bilateral ectopic. We opened the abdomen and it was a bilateral ectopic, and the uterus enlarged with about a two months' pregnancy. Five days afterwards the woman miscarried with a foetus of seven or eight weeks. It is the only case I know having the two together. You find cases of bilateral ectopic, or ectopic and pregnancy at the same time, but the three together I have not heard of before.

Ectopics, as the essayist says, are more common than the average person thinks. Very often you open the abdomen for other things and there you find old evidence of ectopic that has been overlooked.

Dr. H. L. McKinnon (Hattiesburg): I would like to report a case I have now. I saw her first in a state of collapse, and made a diagnosis of tubal pregnancy and removed the patient to an institution. She had had pernicious vomiting for six weeks and absence of menstruation for eight weeks. She cleared up rapidly after putting her on treatment and rest, and I thought I had missed the diagnosis, and that she had acute gall bladder instead of tubal pregnancy. We allowed the patient to leave the institution on the eighth day. The fifth day after she left she aborted. I was called on the third day. The patient had gotten off the bed for the purpose of voiding, and had collapsed on the floor, and was still there when I reached the house. She was in such a predicament that we could not have her moved back to the institution. We worked with her that day, and at four o'clock that afternoon she had a second hemorrhage and on opening the abdomen we found a tubal pregnancy that had ruptured at ten o'clock Sunday evening, and we operated at four o'clock on Monday. She is coming along nicely now.

About ten years ago I had a case of bilateral pregnancy which stayed in contact for three months, when the tube ruptured.

Dr. R. A. Clanton (Grenada): Too often the physician has no opportunity to see his patient because of indifference on the part of the patient. I have had several cases of extrauterine pregnancy and they all had ruptured before the patient called a physician.

The diagnosis is not always easy. I remember a patient once under my care, a negro woman somewhere in the twenties, whom I had treated several times during the year for chronic appendicitis. On Christmas Eve, following a celebration, I was called to see her, and apparently she had acute appendicitis. I carried her to a hospital and two of the most prominent surgeons in Memphis said it was acute appendicitis; another said it was pustules. When we operated we found she had a ruptured tubal pregnancy, and also acute appendicitis.

When it comes to making a diagnosis of extrauterine pregnancy, it has occurred to me in the last few years since most of us have access to the X-ray that it would be a valuable adjunct in making this diagnosis.

Dr. R. D. Sessions (Natchez): There is one point that has been overlooked, it seems to me, in the question of diagnosis of tubal pregnancy. I have found it present a number of times, and it is so constant that I have learned to value it quite highly. That is, upon digital examination your finger comes in contact with a round mass that is not stationary. As your finger pushes up it recedes. That is a very persistent symptom in cases prior to rupture. I just want to call your attention to that fact.

Dr. V. B. Philpot (closing): As I stated, I believe you all agree that diagnosis is the most important feature to consider in tubal pregnancy. However, a rupture does not necessarily mean death, even quite an extensive rupture, and I do not think it is an indication, especially where there is considerable shock, for immediate surgery, but it is preferable to postpone surgical interference until the symptoms of shock have been overcome.

New Orleans  
**Medical and Surgical Journal**

*Established 1844*

Published by the Louisiana State Medical Society under the jurisdiction of the following-named Journal Committee.

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**SUBSCRIPTION TERMS:** \$2.00 per year in advance, postage paid, for the United States; \$2.50 per year for all foreign countries belonging to the Postal Union.

Material for publication should be received not later than the twentieth of the month preceding publication. Orders for reprints must be sent in duplicate when returning galley proof.

THE JOURNAL does not hold itself responsible for statements made by any contributor.

Communications should be addressed to: *New Orleans Medical and Surgical Journal, 1551 Canal Street, New Orleans, La.*

**RUDOLPH MATAS**

*THE SOUL OF THE SURGEON*

*TO R. M.*

*He treads life's thoroughfare, where pain  
 And peace; want, plenty; joy, distress, all meet  
 And merge in feverish misery at his feet,  
 Beseeching benediction,—one long chain  
 Of human discord, which skilled hand must stain  
 To tune anew to hope, until, replete  
 With music, 'neath transforming touch, full sweet,  
 The broken keys sound pure, free tone again!*

*A master-player, his the Christ-like part  
 Of speaking God's intention to his race;  
 Baptizing with fresh beauty blemished souls  
 And steering man's crushed courage, by love's  
 chart,  
 To light divine, where health's refulgent grace  
 Heals shattered spirits seared by fleshly tolls.*

—Jane Grey Rogers.

Dr. Rudolph Matas was born at Bonnet Carré, Louisiana, September 12, 1860. He was an only son, his father, Dr. Hereu Matas, being himself a native of Gerona, Spain. Although when two years of age, the boy was taken by his parents to their ancestral home, and for the succeeding eight years

divided his childhood between a residence in Barcelona and Paris, the present President of the American College of Surgeons is American by birth, and American in all that appertains to the best definition of that term. It is surprising how the erroneous statement persists concerning his Spanish nativity. His Christian name also is fashioned frequently according to the Castilian pattern. As a matter of fact, he acquired his baptismal title not from his Spanish forebears but through his father's familiarity with and fondness for French literature. Sue's hero, Rodolphe, in "Les Mystères de Paris," made a strong appeal to the imagination of Dr. Matas, père, and it was in honor of this character that his infant son was christened. Thus the name becomes Rodolphe, Raoul, Rodolfo, Rudolph, Ralph, according to linguistic transplantation. In the case of Dr. Matas, it has finally settled into its present teutonic form.

Rudolph Matas matriculated in 1877 in the Medical Department of the University of Louisiana. At the end of his first session, he entered the competitive examination for the post of resident student in the Charity Hospital of New Orleans. This he won without any apparent mental effort, —certainly without any political pull, the young aspirant being at that date almost a total stranger in his native state. From the moment of this triumph, however, he became a conspicuous figure in medical and civic affairs. Given opportunity, immediately his sterling qualities created an impression that time has only rendered more stable and indelible. Graduating from the medical school in 1880, he became Demonstrator of Anatomy in 1886, a position which he retained with distinction until his election to the Chair of Surgery in 1894. This was upon the occasion of the death of that popular surgeon, Dr. A. B. Miles, whose empty place at once became subject of animated discussion, speculation and policy. By some, it was thought that the time was ripe for the importation of 'outside talent;' that the best interests of the school and community could be served by 'expansion' through the introduction of new ideals and the establishment of closer 'foreign relations.' Almost as a unit, the entire city flamed into indignant protest. "Matas and Matas only" became the universal cry, and the election of Matas was unanimously demanded by press and people. The papers of that time teem with editorials, letters from laymen, communications from professional associates, alumni and students, all insisting that the honor



DR. RUDOLPH MATAS  
President of The American College of Surgeons



fall where most due,—upon the shoulders of Rudolph Matas. There it has rested, unsullied by personal ambition, undimmed by selfish aspiration, until, after more than a quarter of a century, it continues to shine resplendent as the beacon light of Tulane University,—a glowing Pharos that makes New Orleans seem a 'star of the first magnitude' in the brightly illuminated firmament of international medicine.

The words of Dr. Andrew Woods Smyth, uttered upon the occasion of the proposed selection of Dr. Matas' successor, seem pertinent for introduction here: "It is nothing short of an outrage that the faculty of Tulane University should entertain the idea of going to Baltimore to fill the chair recently made vacant by the death of Dr. Miles. Dr. Matas has genuine ability, which, in my judgment, is superior in many respects to genius itself. He is beyond question the greatest surgeon New Orleans has ever possessed. There is nothing that he teaches that he does not exhaust. . . . I feel certain that the future will certainly corroborate the opinion which I now express regarding Dr. Matas, and any honor bestowed upon him will be justified by history. . . . I am in earnest when I say that Matas is a greater surgeon than Stone, Miles, or Smyth have ever been, and he is profiting by experience; reading and writing all the time. Whatever position, reputation or standing he has thus far acquired in the profession, is the result of his own intrinsic merit and the application born of intelligence and superior judgment. Besides his knowledge of his profession, he has versatility as well, being scholarly, and a clear and fluent writer, on any subject." This is an abstract from an interview of September 9, 1894 in the New Orleans *Times-Democrat*, and is the verdict of that renowned surgeon who was first to successfully ligate the innominate artery (1864),—a feat that had been attempted, with failure, by Valentine Mott of New York in 1818. In passing, it may be well to observe that Valentine Mott is still often quoted as the supreme superlative in the art of vascular surgery. As a matter of historical fact, Dr. Mott is in the freshman class when his records are compared with those of Dr. Matas in the same field. Witness Mott's Left Subclavian Aneurism cases, two in number, as against the eight 'personally conducted' by Dr. Matas. This proportion may serve as index for contrast and conclusion!

The headings of the numerous newspaper

articles of this date (1894) are most interesting. "Recognize Home Talent." "Call for Matas." "Tribute to Matas." "Matas for the Surgical Chair." "Matas, the Man." "A Woman's Opinion, High Praise From One of the Gentler Sex." "Item Congratulated, The First to Name and Support Dr. Matas as Miles' Successor." Thus on and on, with Matas the theme and Matas the inspiration, the eulogies flowed thick and fast, always received by his multitudinous admirers with increasing enthusiasm. Teachers, students, citizens, all united in one grand chorus of support, and again harmonized into one tremendous Amen when the final decision of the faculty became public property. So it came about that the youthful acolyte passed from his novitiate into the full heritage of knighthood and received the chair of surgery as token of his unblemished chivalry and unswerving devotion to the Vision of High Calling. There may he long remain the great high priest of surgical principles and medical ethics, in whose consecrated hands the scalpel remains an untarnished excalibur, potent in the exercise of good, and equally powerful in the destruction of evil.

And were it permitted "The Soul of the Surgeon" to assume fleshly form, there are not a few among us who strongly suspect that the incarnation would wear the familiar features and walk the accustomed ways of that 'good physician,' Rudolph Matas, with whose inspiring presence it has pleased God to bless our generation.

We record with pride the fact that Dr. Matas served as editor to the *New Orleans Medical and Surgical Journal* from 1883 to 1885. None more illustrious has wielded the pen in behalf of medical advancement. A pursuivant of his editorials contributed during these years show the wide range of his interests as well as the conscientiousness that ever marks any effort he has put forth.

Touching his public life, there are many biographical sketches to convince the reader that the career of Dr. Matas has not been empty of deserved recognition. President of the New Orleans Medical and Surgical Society in 1886, the Louisiana State Medical Society in 1894, the American Surgical Society in 1910, the Southern Surgical Society in 1912, it is clear that the Local, State, Sectional and National societies have sought to distinguish themselves in honoring the man whose memorable addresses upon such occasions give an intimate knowledge of the ideals that have swayed a truly

great Aesculapian and collaborated with him in writing his whole code of conduct for life.

In addition to these tributes of organized medical bodies, he has been selected as orator for such notable addresses as the Jerome Cochran Lecture, Alabama State Medical Society, in 1911; the Mutter Lecture, Philadelphia, College of Physicians and Surgeons, 1916; First John Thompson Hodgen Lecture, St. Louis Surgical Society, March 26, 1921; W. S. Halsted Memorial Lecture, (by invitation of Dr. Finney and President Goodnow), Johns Hopkins University, Dec. 15, 1923. In October, 1922, he delivered, by request, an address before the Congrès Français de Chirurgie upon the topic, Vascular Surgery, in which he has become international authority. Close upon this last mentioned distinction came the notification of his election by acclamation as honorary member of the Royal Academy of Barcelona, "in recognition of his exceptional attainments and his contributions to the progress of medicine." On January 10, 1923, he was elected corresponding member in the Société Nationale de Chirurgie, as was announced in the bulletin of that organization in Paris on January 15th. This was a signal honor, the published transaction (*Bulletins et Mémoires*) of this society being accounted the most valuable surgical contribution in the scientific world.

In 1915 (April 30), Washington University, Saint Louis, Missouri, bestowed upon Dr. Matas the degree LL.D. along with a goodly company consisting of such men as F. P. Mall, W. H. Howell, W. H. Welch, Simon Flexner, S. J. Meltzer, R. H. Chittenden, W. G. Gorgas, Abraham Jacobi, G. E. Vincent, A. R. Hill, A. L. Lowell, Nathaniel Wille (of Christiania, Norway),—names which plainly indicate the type of individual with whom Dr. Matas is associated in the academic mind.

Something of his radiant personality may be gathered from the lasting imprint which he has made upon his staff and pupils, whose grateful appreciation may be fairly judged by the dedicatory tribute which have appeared whenever one of these have launched a volume upon the sea of literature:

Dr. Warren Stone Bickham, in his preface to vol. 1 of his monumental system of operative surgery (Phil. Saunders, 1924) takes occasion to write: "It is with especially grateful and pleasant memory,—akin to more than ordinary deep feeling,—that the writer recalls the happy and surgically

profitable days spent in professional associateship with Professor Rudolph Matas,—with his extraordinary store of surgical knowledge very probably not surpassed, and maybe not equalled, by that of any surgeon living, in its depth, range and detail."

Dr. Carroll W. Allen dedicates his great book on Local Anesthesia to "Professor Rudolph Matas; Surgeon, Scholar, Teacher; one of the pioneers in the field of local and regional anesthesia, under whose guidance the author was initiated into surgery, whose example and friendship prompted the conception of this work, and whose teachings and writings have contributed many pages to this text."

Dr. Isidore Cohn, has just issued his noteworthy volume on Normal Bones and Joints (N. Y. Hoeber, 1924) and its fly leaf bears this inscription: "To Dr. Rudolph Matas, my friend, teacher, and distinguished associate."

From the great surgeons and physicians of his period, personal appreciations and praises have frequently found voice. Suffice now to cull a few which are suggestive of the far-reaching influence of our fellow citizen whose benefits to humanity constitute so priceless a portion of our nation's wealth, nay more, of the whole world's treasure,—the saving of life, and restorations of the sick.

Sir William Osler in an article entitled "Arteriovenous Aneurysm," appearing in the *London Lancet*, May 8, 1915, may be quoted:

"Not so much more than a century has passed since men of the John Hunter type took up vascular surgery where Rufus and Antylus had left it, and only to this generation of experimental surgeons, such as Eck, Ballance, Matas, J. B. Murphy, Halsted, Carrel and Guthrie, could the best of the Greeks go to school. . . . I was greatly impressed with the statistics given by Matas at the last International Congress on Medicine, dealing with operations on surgery generally. . . . and may I refer the younger army surgeons to the section on aneurysm in Keen's Surgery, by that modern Antylus my old and valued friend, Rudolph Matas of New Orleans."

W. W. Keen, *Harper's Magazine*, April 1909, has this to say: "In the treatment of aneurism, Matas of New Orleans has made the greatest improvement from the days of John Hunter, over a century ago." This opinion Keen constantly reiterates in his subsequent references to vascular surg-

ery and, in a list of endoaneurismorrhaphies which end with September, 1919, makes this statement: "These statistics show extraordinary success as to life and limb. They confirm what I have often said, that Dr. Matas has accomplished more for the successful treatment of aneurism than any other surgeon since John Hunter."

James Gregory Mumford in his charming volume entitled *Surgical Memoirs and other essays* (N. Y. 1908) writes in his *Studies in Aneurism*: "We point with proper pride and honest satisfaction to the accomplishment of Matas, whose work on aneurism is the first worthy of permanent record since the days of John Hunter." "Matas' studies and his operation for aneurism furnish our latest advances in this fascinating subject."

High encomiums these and from the highest medico-literary authorities, but it is possible to continue ad infinitum:

Chairman Lipscomb, before the Mississippi State Medical Association, in May, 1915, in introducing the orator of that occasion, said feelingly: "The foremost man in the foremost college in this great Southland of ours, the Nestor of our brilliant and gifted profession, he needs no introduction. We have but to mention his name and his contemporaries throughout the United States stand at attention. Someone has said that, to be an ideal doctor, we must possess the wisdom of Solomon, the faith of Abraham the meekness of Moses, the patience of Job, the charity of Dorcas, the eloquence of St. Paul, the bravery of Joshua, the strength of Samson, the executive ability of a Jezebel, must be a hunter like Nimrod, a fisher like Peter, a climber like Zaccheus, a driver like Jehu. He should be free of Asa's gout, the melancholy of Saul, the gastric infelicity of Timothy; have all the virtues of the most virtuous and the religion of all saints. All of these are his. And now, Ladies and Gentlemen, I have the distinguished honor, the esteemed privilege and the great personal pleasure of introducing to you Dr. Rudolph Matas, of New Orleans, who will deliver the oration."

Dr. Miranda, a representative of the Mexican Board of Health, assigned to New Orleans for a special course in hygiene and tropical medicine, has published a delightful little sketch in the official journal of the Mexican Medical Association. A quotation from a translation, which appeared in the *Tulane Hullabaloo* of January 4, 1924, gives an idea of the effect wrought upon the heart and mind of "a stranger within the gates"

upon whom the effulgence of a genial welcome brought to fruition rich and grateful recognition of unostentatious greatness:

"Dr. Matas is not a showy operator. He thinks less of the speed made in performing an operation than he does of the time saved in restoring his patients to health. Careful preparation is never sacrificed to ephemeral elegance. He is an accomplished surgeon, not a spectacular performer. . . . Painstaking in his clinical observations and in his laboratory investigations he is as thorough in his diagnosis as in his operations. . . . If from the scientist, we pass to the citizen,—socially considered, his personality is no less remarkable. Good, gracious, tender with his patients, affectionate with his friends, sympathetic with his students, he represents that ideal type of physician of whom we so often dream and whom we so rarely encounter."

Da Costa's *Modern Surgery* (Phil. Saunders. 1910) reads on p. 426 "I believe that the Matas operation is a very notable advance in surgery, that it is the most important work that has been done on aneurysm since the studies of John Hunter; that it is safer than the older methods and much less apt to be followed by gangrene."

John F. Binnie in his admirable textbook on *Operative Surgery* (ed. 6 p. 828) also gives his commendation in brief but convincing phrase:

"When applicable, the author believes one or the other of the methods of Matas superior to all others in the treatment of aneurysm."

And, now comes the April 1924 *Bulletin of the School of Medicine*, p. 156, University of Maryland, containing an article from the pen of Dr. Nathan Winslow, in which the writer takes the opportunity of saying "It afford me much satisfaction. . . . to express to Dr. Matas our readers' appreciation of the pioneer work he has done in arterial surgery thereby placing the profession under an everlasting debt to his genius."

There are authors too, whose literary attainments are in no sense scientific or surgical, who have also felt the power and acknowledged the influence of this remarkable personality. It is well known, in New Orleans, at least, that during his abode in this city, Lafcadio Hearn and the young doctor of medicine enjoyed a pleasant and intimate acquaintance. In recounting the history of the making of "Chita," Miss Elizabeth Bis-

land in her "Life and Letters of Lafcadio Hearn" prints this paragraph:

"The book was dedicated to Dr. Rodolfo Matas, a Spanish physician in New Orleans, and an intimate friend,—frequently mentioned in the letters to Dr. Geo. M. Gould of Philadelphia, with whom a correspondence was begun about this time." p. 97, vol 1. Bost. H. & M. 1906. The dedication reads: "To my friend, Dr. Rodolfo Matas, of New Orleans." Date of publication N. Y., Harper Bros., 1900, copyright 1889.

In one of these letters to Dr. Geo. M. Gould (p. 395 of same volume) written from New Orleans in 1887, Hearn begins:

"Reading your letter, I was strongly impressed by the similarity in thought, inspiration, range, even chirography, with the letters of a very dear friend, almost a brother, and also a physician,—though probably less mature than you in many ways. A greater psychological resemblance I have never observed. My friend is very young, but already somewhat eminent here;—he has been demonstrator of anatomy for some years at our University, and will ultimately, I am sure, turn out a great name in American medicine. But he is a Spaniard,—Rodolfo Matas.

I first felt really quite curious about him after having visited him to obtain some material for a fantastic anatomical dream-sketch and asked where I could find good information regarding the lives and legends of the great Arabian physicians. When he ran off a long string of names, giving the specialties of each man, and criticizing his work, I was considerably surprised; and even felt a little skeptical, until I got hold of Leclerc and Sprengel and found the facts there as given me by word of mouth. I trust you will meet him someday and find in him an ideal confrère, which I am sure he would find in you. It is a singular fact that most of my tried friends have been physicians."

A letter to Henry E. Krehbiel dated October, 1886 (p. 380 vol 1 has another pleasant reference: *Life and Letters of Lafcadio Hearn* by Elizabeth Bisland).

"My friend Matas has returned. He tells me delightful things about Spanish music and plays for me. He also tells me much concerning Cuban and Mexican music. He says these have been strongly affected by African influence,—full of contretemps.

He tried to explain about the accompaniments of Havanen and Mexican airs have peculiar interresemblances of a seemingly dark origin—the bass goes all the time like

Si, Mi, Si,—si, mi, si. See me? See. that's how I remembered it. But he has given me addresses, and I will be able to procure specimens."

Mr. Edward Larocque Tinker has just published a charming book on "Lafcadio Hearn's American Days" and there is much interesting reading matter touching the "brilliant young Spaniard," whose name forms the caption for Chapter X. We are disposed to forgive the graceful author his misleading information regarding the birth-right of this great son of the state of Louisiana, for his ready pen reveals much of the great good heart as well as of the great broad brain of the youth who companioned so genially and sympathetically with the fascinating but eccentric genius and to whom the young physician ministered so generously in the form of professional, spiritual and material assistance.

So much, then, from his professional brethren,—the jury of his peers,—and from those who, in other walks of life, were so fortunate as to come in contact with one of those whom Homer, centuries ago, characterized as "worth many men." Such expressions of opinion may give at least a partial answer to the queries, why does the American College of Surgeons honor itself in electing Rudolph Matas its President? Why do we congratulate Tulane University and the city of New Orleans upon its choice?

The answer to the first question is obvious. To give it here would be indeed but 'vain repetition' after the material quoted from text-books and public declarations of men of authoritative voice. As for the second query—Dr Matas is the greatest asset of the university and the city, because upon him, as upon no other man living in our midst, the eyes of the world are focussed. He meets the microscopic examination by measuring up perfectly to all the requirements of greatness.

He has benefited the college and New Orleans not only by his own personal example and precept, but by his material contributions. Through him and through him alone we are indebted for the munificent gift of the late Alexander Hutchinson, whose behest of something like a million dollars has kept Tulane Medical School abreast of its times, and whose Charity Hospital's Nurses' Home was also brought into existence by an additional gift of \$50,000 from the same philanthropist through the agency of the same potent influence. The Delgado Memorial Building and the

large sum which insures its permanent maintenance, are also concrete examples of what the city and the university owe to the wise suggestion of this tried and trusted friend of the donor, who, in confirmation of his full confidence in his friend, Dr. Matas, has made the Professor of Surgery, Tulane, the Dean of Medical School, Tulane, and the Professor of Obstetrics, Tulane, directors in perpetuity of his endowment fund.

The personal gifts from Dr. Matas to his alma mater are perhaps less widely known, because given with such self effacing modesty that they are recognized only by those whom they most benefit. The library alone is an eloquent witness of his soulful generosity. The number of books due to his provision testify in unequivocal terms to the deep interest of the donor as do their quality and usefulness to their own intrinsic and priceless value.

His professional zeal and efficiency as teacher, his acknowledged talent as medical author, bear abundant fruit that may be readily gathered by those hungry for knowledge on the subject. The book reviews on his mammoth undertaking in vol 5, Kenn's Surgery, alone would give convincing proof of his value as writer and worker:

Of this publication, the *British Medical Journal*, February 12, 1910 says: "The first article, a monograph of 350 pages on the surgery of the vascular system by Rudolph Matas, is in itself enough to make the book indispensable to general surgeons . . . With the most unostentatious of guidance, the reader is led to a safe discriminating amongst the many tentative methods for pericardiotomy, for exposure of the heart, for suture of arteries and veins, for anastomoses and transplantations, for aneurysmorrhaphy."

*American Journal of Surgery*, April, 1910: "The fifth and last volume of Keen's Surgery opens with a masterly chapter on Surgery of the Vascular System by Matas. This chapter is the most comprehensive and at the same time the most critical resumé of the present status of vascular surgery with which we are acquainted."

*New York Medical Journal*, August 13, 1910: "The first paper on Surgery of the Vascular System is by Rudolph Matas, who in his usual trenchant and thorough style describes the best method of pericardiotomy, thoractomy, and cardiorrhaphy and of treating surgical conditions of the veins and hemorrhage."

*American Journal Medical Sciences*: September, 1910. "By all means the most im-

portant contribution in the present volume, if not in the entire series, is that on Surgery of the Vascular System by Professor Rudolph Matas. . . . One is as much impressed with the amazing industry as with the judiciousness and impartiality of the author."

*Surgery, Gynecology & Obstetrics*: November, 1911 says: "Authoritative comprehensive, well illustrated, it leaves nothing to be desired and forms one of the most satisfying chapters of the system."

*Western Medical Review*, January, 1911: "The chapter on Vascular Surgery by such a man as Matas needs no comment. It is in my judgment, the most masterly chapter on this subject yet published in English. It is complete, systematic, forceful, clear, and yet not overburdened with details. It is a very valuable addition to the English literature on a much needed subject. (A. C. Stokes)."

The *Bibliography* of Professor Matas begins in 1882 with a contribution to the *New Orleans Medical and Surgical Journal* (vol. ix, p 601). Since that time, he has written articles or furnished material for practically every surgical text-book of his generation, besides countless editorials for the journal of which he was many years co-editor, and papers to numerous periodicals upon every phase of surgery and many aspects of pathology. A fluent writer, he has published something like three hundred monographs covering a wide range of subjects, to say nothing of his extempore utterance and addresses delivered on sundry semi official and somewhat informal occasions.

During the world war Dr. Matas was appointed Major in the Medical Reserve Corps and rendered efficient service as instructor to the classes of medical officers detailed by the government for study in the hospitals of New Orleans. The syllabi which Dr. Matas published at that time manifest not only his unparalleled store of knowledge but also his superhuman capacity for taking infinite pains,—a capacity which enabled him in spite of his own personal anxieties and heartbreaks suffered during that period, to "carry on," sticking valiantly to his arduous post and holding high his torch of devoted patriotism in the face of overwhelming suspense, and sorrow impending domestic loss. In a recent address to the assembled classmen of the School of Medicine, Tulane, Dr. Matas had this to say: "Four decades and more have elapsed since I matriculated as a student of medicine in

this very school. If I have survived the stress and strain of an arduous professional life and if, in spite of my faults and shortcomings, I have the honor to be here today addressing you, it is due to four things:—First, a robust inheritance, for which I can never sufficiently thank my honored parents; Second, tenacity of purpose, without obstinacy; Third, a supreme and unalloyed love of my profession. Fourth, an unlimited and unquenchable desire to be worthy of its mission.”

Of the Master’s work during his more than thirty years of instructorship volumes might be recited, but there is a silence more eloquent than speech and the time for entering the inner sanctuary, the Holy of Holies of his High Priesthood, is not yet arrived. Fortunately New Orleans, Tulane and the outside world know something at least of the material accomplishments and spiritual achievements of this great Louisianian. A soul stirring symphony it will sound when the time ripens for its full orchestration!

During his term of service, the course in Surgery has undergone transformation,—transfiguration may be the better term. A very limited outline, it now appears looking in retrospect to that autumn of 1894 when, during the calm that follows storm, the boyish Professor of Surgery took his seat in the vacant chair and began his apostolate. At present, there are four grand divisions of Surgery in the field of Surgical Teaching, each group with its own set of instructors:—The laboratory of minor surgery, Clinical minor Surgery, Surgical principles, Regional Surgery. Thus is graded the entire scheme of teaching and thus it receives and gives quadruple value in the whole system of medical education.

Basil Hall, in an Address on “Self Restraint in Surgery,” *Brit. M. Journal*, November 17, 1906, quotes the following *in re* Guy de Chauliac:

*“Bold when sure  
Cautious in danger  
Kind to the sick  
Friendly with fellow workers  
Not greedy of gain.”*

Of our own well beloved Rudolph Matas could a better portrait be painted? Well might we paraphrase John Dimitry, of New Orleans, who, in paying tribute to Albert Sidney Johnson said:

*“A man tried in many high offices  
And critical enterprises,  
And found faithful in all. . . .  
Resolute, moderate, clear of envy, yet not wanting  
In that finer ambition which makes men great and pure.”*

*In his honor impregnable  
In his simplicity,—sublime. . . .  
History shall cherish him  
Among those choicer spirits, who, holding their conscience unmingled with blame  
Have been, in all conjunctures, true to themselves,  
their people and their God.”*

In closing testimony, is offered the synopsis of Dr. Matas’ work on aneurism, —that peculiar specialty which has given his name a place in medical dictionaries and has written his technique in large type in all histories and works on the subject of vascular surgery.

*Synopsis of collective results obtained in the cure of arterial aneurisms, by the method of intrasaccular suture (Endoaneurismorrhaphy—“Matas Operation”) up to September, 1922.*

(Extract from Report of the French Congress of Surgeons, by Dr. Matas, October 2, 1922).

Total operations reported by different American and foreign Surgeons 350\*

Operations performed by  
Surgeons in Louisiana, . . . . . 93  
Operations performed by Dr. Matas . . 59

Of the obligative type . . . . .	232	or	66.1%
Of the Restorative type . . . . .	68	or	22.1%
Of the reconstructive type . . . . .	40	or	11.27
	350		

	Per cent
Of the total number (350) 17 died or	4.61
Of the total number (350) there recovered . . . . .	333 or 95.39

	Per cent
Total gangrene . . . . .	12 or 3.42
Total hemorrhage . . . . .	6 or 1.6
Total relapses . . . . .	3 or .8

(Two of these relapses occurred in reconstructive cases and were subsequently cured by obliterative suture).

*Synopsis of Dr. Matas’ personal experience in the Surgery of the Subclavian Arteries (up to June, 1924):*

17 occlusions for aneurism; 1 for wound.  
6 arterio-venous aneurisms.  
11 arterial aneurisms.

*Left Subclavian: 8 (5 arterial; 3 arteriovenous).*

Five cases of occlusion of First Division

\*Since above report was published, there have been 102 additional cases, increasing the total number of endoaneurismorrhaphies to 452 (June 1, 1924).

of Left Subclavian with aluminum bands (2) and tape ligatures (3) for Arterial Aneurisms.

One case of band occlusion of Third Division for Subclavio-axillary aneurism.

One band occlusion of Third Division of Left Subclavian for arterio-venous aneurism of upper axillary.

One transvenous suture of arterio-venous fistula of Left Subclavian (Third division).

*Right Subclavian*: 5 (2 arterial; 3 arterio-venous).

One band occlusion of First Division of the subclavian and of the Common Carotid for traumatic pathogenic aneurism of the Second and Third Divisions of Right Subclavian.

One band occlusion of Subclavian (Third division) for traumatic pathogenic subclavio-axillary aneurism.

One aneurismal varix (arterio-venous fistula) involving the second division (bullet scalenus) with ligation of the subclavian on each side the scalenus.

One arteriovenous communication between branches of the thyroid axis and satellite veins, with ligation of branches after

complete exposure of the subclavian throughout its course.

Four Band Occlusions of the Right Subclavian (Third Division) following interval occlusions of the Common Carotid for Ascending Aortic aneurism (Brasdor-Guinard) procedure.

In 1 case, survival of patient for 7 years (still living) with remarkable consolidation and contraction of the aortic aneurism.

One clamping with forceps (left in situ) for hemorrhage caused by tear in Second Division of Subclavian while extirpating cancerous metastases in patient 73 years old.

Total, 17.

One Arteriovenous Right Subclavian Vessels. Recovery\*

*Results*:

Recovery of 17 patients with permanent cure of the aneurism, except 4 aortic aneurisms. Gangrene in one case of arteriovenous aneurism, with loss of thumb and little finger and part of forearm. The only case in which peripheral ischemia following occlusion of the artery gave any cause for anxiety.

One death from shock and pleuro-pneumonia on fourth day, in case of accidental tear of sclerotic subclavian requiring control with forceps left in situ,—while extirpating cancerous metastases in the neck.

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\*Operation September, 1924.

# MEDICAL ECONOMICS

*Chas. A. Bahn, M.D., Department Editor.*

## MEDICAL ECONOMICS V. MEDICAL RECORDS

The ideal medical record contains the information you want; written, expressed, arranged and located as you want it. This implies that the maker of the record not only is interested but understands what information will be wanted, expresses it legibly, systematically, and concisely; and places the record where it can be easily found. All of which is apparently simple.

Generally speaking, a medical record should contain the information necessary for a reasonable understanding of patient, ailment, progress, and treatment. Fundamentally, it consists of what both the patient and the doctor experience, think, know, and do about the health problem under consideration. Literally this would make a long and not altogether practical arrangement so we shorten or abstract the story, noting only that part of the patient's and doctor's participation which will probably be of present or future practical value.

Each of us is practically daily recording something which adds more or less to the sum and total of our own and general medical knowledge. This contribution is being written more or less carefully or carelessly, rapidly or slowly, legibly or illegibly, simply or ornately, systematically or unsystematically; and expresses individual thought and observation, or a crude repetition of the thoughts of others. This book on which we are writing daily, is our record of our patients and is probably the best available index of our medical knowledge, our thoroughness and accuracy of observation, our clearness of expression, and the orderliness of our thought. Although it is possible for some to safely entrust memory with all the detail, necessary to efficiently understand and treat patients at the present time, written records unquestionably for the majority, facilitate classification, accurate observation, systematic thought and clear expression.

From a practical standpoint however, we should not forget that at least in office practice, we are working on the patient's time, and that we are usually expecting to receive remuneration for every moment devoted to record making. It is therefore neither fair nor right that we waste the patient's time and money in making records which will be of no practical service, in order to magnify our efforts for financial or other reasons.

There are a few fundamentals which apply to all medical records: to wit, *What, How, Where, When, and Why*. If we understand these few short words as they apply to this subject and are sufficiently interested, our problems will almost automatically solve themselves in a satisfactory manner, just as the most effective method of treatment almost decides itself proportionately as we understand the patient and the ailment.

No two persons think or express themselves exactly alike. This very difference or individuality, if properly expressed, is our greatest asset, one that should not be destroyed by literally copying any one. Unfortunately most of our mistakes are really not our own, but are copied from others. Of course we should carefully and thoroughly study other's methods, with a view of

understanding their underlying principles and application, that we may practically adapt the desirable, to our use; but in the end we must do things our own way, but this should be our best way.

Medical records are usually started with certain general information such as name, age, sex, race, occupation, address, etc., placed at the top or bottom of the record depending upon the method of filing. Always record the patient's given name, and not the initials alone; thus John S. Jones and not J. S. Jones. Date all record notations.

The next section usually deals with the history, or patient's statement why medical aid has been sought, including other pertinent information about present, past or family health and illness, which will give the physician from the patient's standpoint, the best possible understanding of the location, classification and efficacious treatment of the ailment in question. Neither too much nor too little information is desirable. The dominant idea is to facilitate an understanding of the ailment. This will often decide whether or not certain information is worth recording. You will doubtless say that it is sometimes impossible to determine whether this or that statement will be important until the whole story is told. The proper valuation of information involves interest, and understanding of the subject, mental alertness, common sense, and experience in record making. As you have these qualities, you will be more able to separate the wheat from the chaff, and as you do not have these qualities you will have to record more non-essentials to include the essentials. Some physicians acquire an almost uncanny ability in detecting the clue on which the understanding of a case depends, in an apparently trivial statement, buried in a mass of less important information, which the patient considers of paramount importance. As Dr. Jackson, of Denver, several years ago expressed the idea, the trained medical examiner, like the blood-hound, can pick up a faint trail and follow it to the end, irrespective of intercurrent circumstance.

The ability to intelligently question a patient is more to be desired than gold and diamonds. To extract important information often with a mental corkscrew, because of the patient's inability to understand; and to pass lightly over certain unimportant details, which the patient considers very important; both without offending or making the patient say what we would like to have said; represents the acid test of taking medical histories. Thus being able, to obtain a truthful, concise, and systematic medical story with a proper valuation of the component parts, usually represents hard work, long practice, extensive medical knowledge, common sense, practicality, and an intimate understanding of human nature. If you have the fundamentals of this most valuable asset, thank Allah, and cultivate them; if not try to develop them.

The beginner in medical records usually takes the patient too literally, losing sight of the fact that the patient's knowledge of the relative importance and classification of symptoms, as well as cause and effect, is often not accurate. Much useless information is thus written. The next



phase of evolution is usually to the other extreme, the patient's statements are totally disregarded and assumed incorrect, unless subsequently proven to the contrary. And here many mistakes are likewise made. Finally, the observing physician assumes a mental attitude between these two extremes; carefully and patiently obtains the necessary information, analyzes and properly values what the patient says and often does not say, realizing that although the patient usually has inside information about the ailment, that observation and method of expression pertaining thereto is often inaccurate, but usually fundamentally correct. The patient is usually more or less vitally interested and seldom has any reason to deceive or misrepresent about health, and usually tries in a more or less understanding way to help.

Practically all of our subjective and objective symptoms can be grouped under certain basic classifications: Changes of, *Size, Shape, Color, Position* and *Function*: sensory, motor, secretory, psychic, and special sense.

The advantage of a basic group method of classifying medical examinations is to promote proper valuation and grouping, sequence of information, and clearness of expression. The statements given the physician are usually presented in a disjointed way, without regard to sequence, relative importance, duration, etc. It is thus practically classified. The disadvantage of a classification of this sort is in the temptation to become purely routine and to evade independent and individual thought, and to assuage ones medical conscience with a subconscious ceremony.

There are two methods of recording histories. The first presents information in a sequence of probable importance, thus the most important symptom is named first, then the duration, severity, cause and other pertinent facts; then the second most important symptom, etc. We may not agree with the patient's statements in part or in toto, but in this section we should express the patient's ideas in our words. This method has the advantage of facilitating a concise grouping of facts arranged in the order in which we will probably look for them, but has the disadvantage that goes with a telegraphic style; more difficult to read because the mind must come to a relative halt after each word or phrase.

The other method presents information in chronologic sequence, that is based on time. Here the record begins with the earliest symptom, and relates the story in the order of occurrence. It has the advantage of readability that goes with a narrative style, but the disadvantage of probably expressing much irrelevant information, thus necessitating a more careful analysis, and separation of fact from fancy.

Generally speaking, the primary object of medical records is to facilitate a practical understanding of the patient and ailment. The detail

into which we must go to get this understanding, is of necessity a most variable factor, one that each case must decide on its own merits. For example, suppose a man came into a doctor's office with a cinder in his eye; his history relates exclusively to the cinder, his vision is normal in both eyes, a superficial systematic objective ocular survey reveals only the cinder in the eye and with the exception of the ocular cinder, the man shows outward evidence apparently only of well-being. Having removed the cinder, we would hardly be justified in suggesting to this patient the advisability of seeking other medical assistance. Let us suppose however, that in this same patient with a cinder in his eye, that vision was defective, or in the course of a superficial routine ocular examination, that other evidence of sickness was seen in the eye possibly due to disfunction of some other part of the body. This information or the presumption therefore, was deduced from certain facts observed in the course of a simple routine subjective and objective eye examination. You would probably feel in this second instance, especially if the patient was someone near or dear to you, that if these facts existed, that the doctor should have observed them and given the patient every possible opportunity to recover from the ocular or underlying general sickness, as facilitated by the information in question. This implies that you believe that a certain standard of thoroughness of subjective and objective examination in all cases should be maintained, the details of which will be discussed later. Assuming then that after having made a preliminary systematic objective and subjective survey, we are unable to understand the ailment sufficiently to give the patient a maximum opportunity to get well, the obvious thing to do is to examine the patient more thoroughly. This is usually begun by elaborating upon the information previously obtained as recorded, this time going into all possible practical detail.

In this way we are able to avoid the loss of time and effort required in thoroughly studying the many details often necessary in the understanding of complicated or obscure conditions, when only a few brief statements express what is necessary to understand simple conditions. Where the simple examination is insufficient to understand the essentials of the case after a systematic survey as shown by the details of the record, we have in reserve a detailed history of present, past, and family health and illness, including all information which might have any possible bearing on any or all of the body functions, with proportionately detailed records, an elaboration which is complete only when the case is ultimately understood.

To be continued next month.

Address inquiries to Dr. Chas. A. Bahn, 1551 Canal St., New Orleans, La.

## NEWS AND COMMENT

*Lucien A. Ledoux, M. D., Department Editor*

### BULLETIN OF THE LOUISIANA STATE MEDICAL SOCIETY

Dr. P. T. Talbot, Secretary-Treas.

We are just completing one of the most successful years of the Louisiana State Medical Society. Up to date we have enrolled 1,198 active members, which is the largest enrollment the State Society has ever enjoyed. Not only have we increased our numerical strength, but judging from the activities of the various District Societies, Parish Medical Societies, and the re-organization of various Parish Medical Societies, we have every reason to believe that there has been a decisive stimulus in medical activities throughout the state. The reports from these various meetings show a full attendance of its component members in conjunction with unusual Scientific Programs which is a credit to them and to our Society. Unusual requests have come to us for assistance in formulating a Scientific Program which we have always given gladly. We will be only too glad to aid any of the Secretaries or members of Scientific Committees in formulating their programs.

I wish to take the advantage of this opportunity to call attention to the various Parish Societies and to all members of the State Society, that as far as membership in the organization is concerned, the fiscal year for 1924 will be completed by December 1st. According to the by-laws, dues for the fiscal year for 1925 are due in advance, and are therefore payable any time during the month of December. The Secretaries of the various Parish Societies should begin at once after December 1st to collect the annual State dues from its members for 1925, and remit as promptly as possible to the Secretary-Treasurer at 1551 Canal Street. In this regard it would be wise to call your attention to the fact that the protection under the Medical Defense of the State Society is covered from the time that each individual due is received by the Secretary-Treasurer of the State Society. It is therefore urgent that these dues be remitted as promptly as possible in order that one may enjoy full protection under our Medical Defense Act.

The following Chairmen of the Sections for the Scientific Program of the Louisiana State Medical Society, to be held in New Orleans, April 21st, 22nd, and 23rd, 1925, have been appointed by the President, Dr. C. V. Unsworth, and accepted:

Medicine and Therapeutics—Dr. W. H. Block.  
Pediatrics—Dr. John Signorelli.

Nervous Diseases—Dr. F. L. Fenno.

Bacteriology and Pathology—Dr. W. P. Butler.

Public Health and Sanitation—Dr. E. F. Bacon.

General Surgery—Dr. L. B. Crawford.

Gynecology and Obstetrics—Dr. P. B. Salatick.

Eye, Ear, Nose and Throat—Dr. Jules Dupuy.

Urology—Dr. P. Jorda Kahle.

Dermatology—Dr. M. T. Van Studdiford.

Radiology—Dr. S. C. Barrow.

All the members of the State Society desirous of reading papers at our next annual session would find it expedient to communicate at once with the respective chairmen for a place on the program. I am sure that our Scientific Program will be completed very early, as arrangements are in formation for some a few months earlier than we have ever been able in the past to do. The Secretary-Treasurer's office will be very glad to assist in this work, and as Chairman of the Scientific Essay Committee, I would respectfully solicit your prompt attention to this important detail. It is only by co-operation in this regard that we will be able to formulate the Scientific Program and get it out in proper form for our next annual meeting. Plans are beginning to develop for an unusual annual meeting in New Orleans, and we have every reason to believe that each and every one of us may look forward to a great deal of pleasure to our meeting again.

So let's get our membership in early and send in our scientific request promptly, and in every way assist the officers and Arrangement Committee to perfect their plans early.

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### EIGHTH CONGRESSIONAL DISTRICT

The Avoyelles Parish Medical Society with Dr. Sylvain DeNux at the helm, Dr. G. R. Fox, Secretary at his desk, Dr. S. J. Couvillon, Councilor behind the gun at every meeting, have thus far had a most profitable year in medical society activities. With a good meeting at Marksville in February, a still better one at Evergreen in April, where several medicos from Rapides added interest to the occasion, the banner meeting not only this year, but in the history of the society at the home of the delegate Dr. R. G. Ducote, Bordelonville, June 14th, where 24 physicians from Avoyelles including a few from Alexandria, responded to the hospitable invitation of the Doctor in appreciation of his loyalty to his society in never having failed to attend a medical meeting of his parish and district society in 20 years of practice, capped the climax of all preceding meet-

ings. Dr. Couvillon, Chairman of the State Medical Society Council read an interesting paper on "Councilor's Suggestions to the Medical Profession," which in truth and in fact, proved to have been a "Chef-d'oeuvre" and exceedingly interesting. Many clinical cases were also discussed.

In August the Bunkie local profession entertained with a good meeting scientific and social and in October the Vice-President, Dr. L. Chatelain of Hessmer accomplished his task with a good supper, which was preceded by a good program.

Rapides Parish Medical Society with Dr. Maurice Peters as President and Dr. J. H. Landrum, Secretary, are having monthly interesting programs. On October 6th, they had a joint meeting with the Eighth District Medical Society at the Eye, Ear, Nose and Throat Sanitarium owned by Dr. I. F. Littell. The occasion was complimentary, the meeting place and luncheon served. Many thanks were tendered Dr. and Mrs. Littell for the hospitalities extended.

Following the supper Dr. F. C. Ewing of Alexandria, read a paper entitled "Swimming Pool Infection," and Dr. H. A. Durham, Superintendent of the Shriners' Hospital for Crippled Children at Shreveport read a paper on "The Treatment of Subacute and Chronic Stages of Poliomyelitis". Both papers were well taken and thoroughly discussed. This being the last meeting of the District Society for 1924 new officers were elected to wit: Dr. Fayette C. Ewing, President; Dr. Kirby A. Roy, Mansura, Vice-President, Dr. M. H. Foster, Alexandria, Secretary-Treasurer, Dr. Carson R. Reed, Natchitoches, Retired President; Dr. J. A. White, Alexandria, Delegate; Dr. L. Chatelain, Hessmer, Alternate.

The Physicians Improvement & Protective Association of LaSalle had an interesting meeting on November 6th, at Trout, Louisiana. Dr. M. H. Foster of Alexandria addressed the association and guests on "Renal Calculi." Dr. D. C. McBride, also of Alexandria, read a very interesting paper on "Radium and Treatment." Dr. S. J. Couvillon, of Moreauville; Drs. R. B. Wallace, S. J. Phillip, Myers and Abbott, of Alexandria, were the other guests at this meeting.

Dr. Couvillon, who is Councilor of the District, addressed the Association on "Organized Medicine" and invited the LaSalle doctors to become part of the State Medical Society. His remarks were well taken, whereupon by a unanimous vote, it was decided to renew their activities on an old charter, or if necessary apply for a new one. It's worth while to mention that the present medical association in LaSalle is the best organized body of medical men in the State. Its By-Laws dealing with professional and business ethics, are the best, theoretically and practically of any in the

State—a shining example to the profession of the day—a beacon light to posterity.

The other parishes in the district are doing good work. The report will appear later.

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#### FOURTH DISTRICT MEDICAL SOCIETY

Regular semi-annual meeting of the Fourth District Medical Society was held at Shreveport on Wednesday, November 12th. In the morning the North Louisiana Clinic Staff presented operations, medical cases and diagnostic procedures in honor of the visiting doctors, at the New North Louisiana Sanitarium. At the Charity Hospital, at 5:30 P. M., the regular program was begun as follows:

##### Scientific Program

Abnormal Hemorrhage in Obstetrics, by Dr. J. D. Kilgore, Minden, La. Technical Points Often Decisive in Surgery, by Dr. E. L. Sanderson, Shreveport, La. Chronic Prostatitis and Seminal Vesiculitis, by Dr. H. L. Crow, Shreveport.

7:30 Dinner—Charity Hospital.

Address by the President of the Louisiana State Medical Society, Dr. C. V. Unsworth, New Orleans. Address by the President of the Tuberculosis and Public Health Association of Louisiana, Dr. W. H. Seemann, New Orleans. A Few Psychiatric Problems, by Dr. T. C. Cooper, Louisiana State Hospital for Insane, Pineville. Some Phases of the Appendicitis Problem, by Dr. L. Abramson, Shreveport. The Late Ideas on Insulin Therapy, by Dr. A. A. Herold, Shreveport. Surgical Conditions of the Gall Bladder, by Dr. T. E. Williams, Shreveport.

The attendance was large, about 100 members and guests being present; much interest was manifested, the talks of the distinguished visitors being much appreciated. This highly successful meeting speaks well for the future of the organization. The following officers were elected for the ensuing year:

Dr. C. M. Baker, Minden, President; Dr. E. L. Sanderson and Dr. J. E. Crow of Shreveport, Vice-Presidents; Dr. J. E. Heard, Shreveport, Secretary, re-elected; Dr. T. J. Fleming, Mansfield, Delegate to the State Medical Society Meeting.

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#### ST. TAMMANY PARISH MEDICAL SOCIETY

At a meeting of the St. Tammany Parish Medical Society on October 10th, 1924, the following resolution was unanimously adopted:

Whereas, it has pleased an All wise Providence to call from his labors our friend and co-worker, Dr. Ben Leon Cusachs.

Therefore, Be it Resolved that we, the St. Tammany Parish Medical Society, in regular ses-

sion assembled, deeply regret that we have to chronicle the loss of so valued and able a member of our society and of the Medical Fraternity, and that we desire to extend our heartfelt sympathy to the bereaved mother and sisters on account of their loss.

Be it Further Resolved, that a copy of this resolution be sent to the St. Tammany *Farmer* and the *New Orleans Medical and Surgical Journal* for publication and to his mother and sisters.

Dr. R. B. Paine, Dr. A. G. Maylie, and Dr. F. R. Singleton, Committee on Necrology.

F. R. SINGLETON, M.D., Secretary.

#### JEFFERSON-DAVIS MEDICAL SOCIETY

The Jefferson Davis Medical Society met in Jennings, Louisiana, on November 14th. The meeting was of a business nature and as a result all scientific papers were dispensed with. The President, Dr. C. A. Martin of Welsh, made a very forcible talk on attendance and the value of these meetings to the doctor. It was moved that December 11th be accepted as the date for the Seventh District Meeting to be held in Jennings. The following were appointed as a committee to provide entertainment for the visiting physicians: Dr. Morgan Smith, Dr. C. Hunter, Dr. E. J. Perrault, Dr. R. S. Kramer, and Dr. F. W. Harrell. It was moved that a letter of condolence be sent Mrs. N. S. Craig by the Society for the death of her husband, Dr. N. S. Craig.

Being the date for the election of new officers the following were elected to serve for the coming year, Dr. R. R. Arceneaux, Welsh, President; Dr. F. W. Harrell, Jennings, Secretary-Treasurer. A vote of appreciation was tendered to Drs. Martin and Kramer for their untiring efforts in behalf of the society for the past three years.

DR. F. W. HARRELL, Secretary-Treas.

#### WASHINGTON PARISH MEDICAL SOCIETY

The Washington Parish Medical Society held its tenth monthly meeting, for the year 1924 at the Pine Tree Inn, Bogalusa, Louisiana, October 30th from 8:00 to 11:00 P. M.

The scientific program consisted of the reading of the following papers: Paper by Dr. D. A. Berwick, Bogalusa. Discussion opened by Drs. Lafferty and J. L. Brock. Non-malignant Ulcers, by Dr. W. T. McNeese, Angie. Discussion opened by Drs. Stringfield and Miller. Trauma of the Eye, by Dr. H. V. Jones, Bogalusa. Discussion opened by Drs. Slaughter and Martin.

To the physicians of the parish who do not attend regularly, a special invitation was extended to meet at this meeting. It was the last meeting before the Southern Medical Association holds its annual meeting at New Orleans. The Secretary was anxious to go there with a record still unbroken. "A meeting once a month and a program for each meeting since our organization" and a percentage of attendance, based on membership (authentic) equal to or as high as any other society embraced in the Southern Medical Association's component organizations.

F. MICHAEL SMITH, Sec.-Treas.

It is gratifying to announce that Richland Parish and LaSalle Parish have been organized in the Louisiana State Medical Society.

#### ANNUAL MEETING, CHARITY HOSPITAL, NEW ORLEANS

At the annual meeting of the Visiting Staff of the Charity Hospital held October 15th, 1924, the following officers were elected to serve during 1925:

Dr. H. W. Kostmayer, President; Dr. Paul J. Gelpi, Vice-President; Dr. Muir Bradburn, Secretary-Treasurer; Dr. John Oechsner and Dr. Hermann Gessner for two year terms; Dr. Chaille Jamison and Dr. Randolph Lyons for one year terms.

#### ALVARENGA PRIZE OF THE COLLEGE OF PHYSICIANS OF PHILADELPHIA

The College of Physicians of Philadelphia announces that the next award of the Alvarenga Prize, being the income for one year of the bequest of the late Senor Alvarenga, and amounting to about Three Hundred Dollars, will be made on July 14, 1925, provided that an essay deemed by the Committee of Award to be worthy of the Prize shall have been offered.

For further particulars address, John H. Girvin, Secretary, 19 South 22d Street, Philadelphia, Pa., U. S. A.

#### TUBERCULOSIS AND PUBLIC HEALTH ASSO- CIATION OF LOUISIANA

The work of the Tuberculosis and Public Health Association of Louisiana is going on very actively. Several branch associations have been organized. Throughout the state the doctors are solidly endorsing the movement, which was first sponsored by the Louisiana State Medical Society. The seal sale of the Association will begin after Thanksgiving day, as there is an agreement on the part of the National Tuberculosis Association with which this association is affiliated, not to begin its seal sales until after the Red Cross Drive has been completed, which will be on Thanksgiving Day. The members of the Louisiana State Medical Society are asked to help as much as possible in promoting the sale of the seals of the Tuberculosis and Health Association of Louisiana, the proceeds of which will be spent along the lines and according to ideas suggested by Organized Medicine, and the work will be carried on under a control.

The Orleans Branch of the Tuberculosis and Public Health Association of Louisiana was organized under the auspices of the Orleans Parish Medical Society on Friday evening, November 14th.

The following officers were elected: S. C. Jamison, M. D., President; Mr. Ernest Burgieres, First Vice-President; Mrs. Chas. F. Buck, Jr., Second Vice-President; Mrs. Joseph E. Friend, Treasurer, and Mrs. Jesse P. Wilkinson, Secretary.

#### NATCHEZ MEDICAL CLUB

The following resolution was passed at a recent meeting of the Medical Club of Natchez, Natchez, Mississippi:

Resolved:—That Professor Rudolph Matas, for his original investigations, surgery so well done, and his great service to humanity has been rewarded by his election to the presidency of the American College of Surgeons:

Therefore:—The congratulations of his friends, the Medical Club of Natchez be tendered to him upon the elevation to the position he so richly deserves.

LUCIEN L. GAUDET, M.D., Secretary.

#### BEHAVIOR CLINIC IN CLEVELAND

Cleveland is to have a behavior clinic where children may be brought for examination by parents or sent from the schools, the juvenile court, or social agencies. It is to be financed by the Commonwealth Fund of New York working with the Cleveland Community Fund.

Marion County, Oregon, of which Salem is the county seat, has been selected as the field of the Far Western Demonstration, the fourth in the Commonwealth Fund Child Health Demonstration Program.

Believing that there is a purpose and place in New Orleans for a society primarily devoted to a consideration of the specialties of obstetrics and gynecology, a society to be known as the New Orleans Gynecological and Obstetrical Society has recently been organized with its charter members composed of the local members of the American College of Surgeons whose practice is largely devoted to these specialties. In the future all regular practitioners of good standing residing in New Orleans who make gynecology, obstetrics, or the morbid anatomy of the female organs a prominent part of their study and practice shall be eligible for election as active fellows five years after their graduation, though the number of such fellows shall be limited to thirty-five. Provision is also made for non-resident and honorary fellows. Meetings are to be held the second Thursday of every month at eight P. M., and except for an annual meeting for the election of officers and transaction of other business are to be entirely of a scientific and clinical character.

At the organization meeting held November 16, 1924, the following officers were elected: president, Dr. W. E. Levy; first vice-president, Dr. John F. Dicks; second vice-president, Dr. E. L. King; secretary, Dr. Hilliard E. Miller; treasurer, Dr. T. B. Sellers; executive committee, Dr. S. M. D. Clark, Dr. C. Jeff Miller, Dr. J. W. Newman, Dr. Peter Graffagnino, Dr. E. S. Lewis was elected to the first honorary fellowship.

HILLIARD E. MILLER, Secretary.

#### TULANE ALUMNI BANQUET

The curtain is drawn, the Southern Medical Convention is history. This issue is going to press, Convention comment is deferred until a later date. Just a few words apropos, one of the brightest spots of this meeting, of great interest to most of us, namely the Tulane Medical Alumni Banquet.

It seemed as if everybody went. The large banquet hall at the Louisiana was filled. Dr. W. A. Evans, of Chicago, '83, presided as toastmas-

ter. Sitting with him, Dr. A. B. Dinwiddie, President of the University; Dr. C. C. Bass, Dean; Dr. Rudolph Matas; Dr. E. S. Lewis, Dr. H. Bayon, Dr. L. R. DeBuys, Mr. Charles Dunbar, president, Tulane Alumni Association, and Dr. Lucien Landry. Dr. Evans was at his best. He carried the Tulane Medical spirit to its peak.

The speaker's theme was "Tulane, Its Past and Present," and paid tribute to its departed leaders, Edmond Souchon and Isidore Dyer, finally honoring and applauding its greatest living leaders, E. S. Lewis and Rudolph Matas.

The menu pleased the most critical taste. The Tulane Glee Club quartette entertained. The meeting of old classmates was refreshing and memorable. If you did not attend you have missed one of the most delightful evenings of a life time.

Note: Base Hospital No. 24, properly stimulated, was noted among those present.

#### WASHINGTON PARISH MEDICAL SOCIETY

The eleventh monthly meeting of the Washington Parish Medical Society was held at the Pine Tree Inn, Bogalusa, Louisiana, Friday, November 28th, 1924, at 8:00 P. M. The date was made for Friday evening instead of the last Thursday of the month, the regular meeting date, so that all physicians who attended the Southern Medical Association at New Orleans would have ample time to return to their homes and then attend the meeting.

The scientific program for this meeting consisted of the following papers: "Treatment of Burns," by Dr. R. R. Roberts. Discussion opened by Dr. Davidson. "Management of a Colles's Fracture," by Dr. D. A. Berwick. Discussion opened by Dr. Brister. "Future Medicine and Its Relation to the Parish Medical Society," by Dr. F. Michael Smith.

#### NEW YORK SKIN AND CANCER HOSPITAL

Alumni New York Skin and Cancer Hospital Graduates of this Post-Graduate School are requested to send their present professional office addresses to the secretary of the re-organized Alumni Association. Dr. Herman Goodman, 15 Central Park West, New York City.

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The recipes have been most carefully worked out under authoritative auspices, and with each recipe is given a quantitative analysis of Carbohydrates, fat, protein and calory value.

The Diabetic section of the book is a most valuable contribution to advanced dietetic practice, with or without insulin treatment. Another important chapter is the report of T. B. Downey, Ph. D. Fellow at Mellon Institute (Pittsburgh),

on the value of pure, unflavored gelatine as a protective colloid in the modification of milk in infant feeding, which in no way changes prescribed formulas. Dr. Downey has determined, by standard feeding tests, that the addition of 1 per cent of gelatine to a quart of milk increases the yield of nourishment by about 23 per cent.

Furthermore, these feeding tests determined that the protective colloidal action of the gelatine was highly efficacious in aiding the complete digestion and resulting assimilation of other basic foods of the vegetable, fruit, meat and fish families.

A most important feature of this book is the simple and complete directions for the preparation of these dishes, without which a prescribed diet so often fails despite the care and caution of the physician.

The book will be mailed, upon request—post-paid and free of charge—by the Charles B. Knox Gelatine Company, Johnstown, New York, to any physician or dietician who requests it.

#### PUBLICATIONS RECEIVED

Lea & Febiger, Philadelphia and New York: "Anatomy of the Human Body," by Henry Gray, F. R. S., Twenty-first edition. "Pathogenic Microorganisms," by William Hallock Park, M. D., Anna Wessels Williams, M. D., and Charles Krumwiede, M. D., "Basal Metabolism and Health and Disease," by Eugene F. DuBois, M. D. "Modern Methods in the Diagnosis and Treatment of Renal Disease," by Hugh Maclean, M. D., D. Sc.

"Outlines of Internal Medicine, for the Use of Nurses and Junior Medical Students," by Clifford Bailey Farr, A. M., M. D. "Principles of Biochemistry," by T. Brailsford Robertson, Ph. D., D. Sc. "The Foundation of Health," by William Barnard Sharp, S.M., M.D., Ph.D.

W. B. Saunders Company, Philadelphia and London: "A Manual of Diseases of the Nose, Throat, and Ear," by E. B. Gleason, M. D., LL.D. "Human Constitution," by George Draper, M. D. "Essentials of Prescription Writing," Cary Eggleston, M. D. "Developmental Anatomy," by Leslie Brainerd Arey, M. D. "Pediatrics," by Isaac A. Abt, M. D. Vol. IV.

P. Blakiston's Son & Company, Philadelphia: "Lang's German-English Dictionary," edited and revised by Milton K. Meyers, M. D.

J. B. Lippincott Company, Philadelphia and London: "Safeguarding Children's Nerves," by James J. Walsh, M. D., Ph.D., Sc.D., and John A. Foote, M. D.

C. V. Mosby Company, St. Louis: "A Textbook of Materia Medica for Nurses," by A. L. Muirhead, M. D., and Edith P. Brodie, A. B., R. N.

Miscellaneous: Forty-Sixth Annual Report of the Department of Health of the State of New Jersey, 1923. "Greffes Animales, Ses applications utilitaires au Cheptel, by le Dr. Serge Voronoff.

#### REPRINTS

"Medical Extension in Ontario," by J. Heurner Mullin, M. D. "Fundamental Principles and Recent Conclusions in Surgery of Congenital Cleft Palate," by Truman W. Brophy, M.D., D.D.S., F. A. C. S.

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Owned and Published by THE LOUISIANA STATE MEDICAL SOCIETY

OFFICIAL ORGAN MISSISSIPPI STATE MEDICAL ASSOCIATION AND ORLEANS PARISH MEDICAL SOCIETY

\$2.00 per Annum, 25c per Copy  
Volume 77, Number 7

JANUARY, 1925

Published Monthly in New Orleans  
at 1551 Canal Street

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Next Annual Meeting Louisiana State Medical Society, New Orleans, April 21-23, 1925  
Next Annual Meeting Mississippi State Medical Association, Biloxi, May 12-14, 1925

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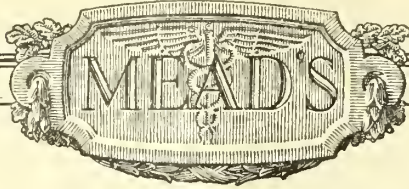
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# New Orleans Medical

and

## Surgical Journal

Vol. 77

JANUARY, 1925

No. 7

### THE USE AND ABUSE OF X-RAYS IN THE TREATMENT OF COMMON SKIN DISEASES.\*

EARL D. CRUTCHFIELD, M. D.  
GALVESTON, TEXAS.

Since the introduction of X-ray into medicine it has undergone many vicissitudes, both in the lay and the professional mind, just as bacterins, vaccines or tuberculins have. The resulting chaos in therapy accounts for many disastrous and terrible results following the use of such a potent and powerful agency. Because of such results, X-ray for a time fell into disrepute as would strichnine used in grain doses. Fortunately, X-ray is now on a par with salve or lotion. Unfortunately the radiologist is not always a dermatologist and perhaps makes no pretense of being. The result is that in many instances X-ray has become a most pernicious agent. That is, it is palliative. The patient, therefore, never being diagnosed of a disease, of which the skin condition in many instances, is only a symptom. Again, many skin conditions are self-limited and recovery occurs about the time the X-ray effect is expected, causing the therapist to be decorated with

an undeserved honor. To point out some of the dangers in X-ray treatments is to explain why some other form of treatment is better in the border line cases if such treatment is equally efficacious as X-ray.

It is well in the beginning to consider the normal laws of X-radiation which correspond in many ways to irradiation from radium. It is to be remembered that we are considering here, only unfiltered X-rays. MacKee and Remer (1) of New York have recently pointed out that unfiltered X-rays obey the following laws.

1. The amount of radiation varies as to the voltage, usually measured in terms of spark gap.

2. The amount of radiation varies as to the amount of milliamperage.

3. The amount of radiation varies directly as to the time.

4. The amount of radiation varies inversely as the square of the distance.

Expressed mathematically, this would be:

$$\frac{M.A. \times S.G. \times T}{D^2} \text{ Equals dosage.}$$

On many hundreds of cases, MacKee and Remer (1) have shown, and controls made with pastilles and radiometer, that with an interruptless type of transformer, at an eight-inch anode distance, and with a spark gap of six inches, (point to point) two milliamperes of current will produce a mild erythema on the flexor surface of a blonde individual in three minutes. Substituting in the formula above, we have thirty-six sixty-fourth as a constant dosage factor. Knowing this, we may solve for any unknown factor in terms of the skin unit. The amount necessary for epilation is one fourth more than the unit dose. The unit dose measured with a pastille corresponds to four Holtsnecks. The epilating dose, therefore corresponds to five H.

Formerly, the so called fractional method of dosage was popular, where a patient

\*Read before the Louisiana State Medical Society  
April 22-24, 1924.

might be treated one or two hundred times with very small amount of X-ray extending over a long period of time. This form of treatment is now largely discarded and while we use fractional parts of a unit, it may be considered semi-intensive.

Whatever form of treatment is used, we have always to bear in mind that severe sequellae may, and usually do, follow the administration of over one and one-fourth units of X-ray to any one area of skin within a period of one month. Unfortunately many of these sequellae do not appear immediately and may be delayed for a period of years. The important sequellae which may follow the production of an erythema are: Atrophy, Telangectasis, Permanent Alopecia, Scarring, Tanning, Freckling, Keratoses, and later Epithelioma. When an erythema is produced, any of these results may obtain. In treating an epithelioma, we unhesitatingly give two and one-half unfiltered units and disregard the possibility of a superficial scar or an occasionally telangectatic area, however, if we are treating acne this is quite a different matter, as the disease is much less offensive than an improper result from X-ray.

In considering X-ray dosage, there are certain factors as age, sex, texture of skin, circulation, color, location and possible idiosyncrasy which should also be considered. Particularly, if the dosage approximates that of an erythema. A blonde individual is more likely to have sequellae than is a brunette. Another important thing to remember is that a sub-erythema dose may be excited into an erythema dose by the application of irritants or metallic substances such as resorcin, B-naphthol, salicylic acid, arsenic, and mercury. The use of X-ray may be an abuse if used in connection with such substances. It is therefore, well to interdict the use of salves and lotions when X-rays are being used.

In treating generalized skin conditions, it is well to remember that general X-radiation may be followed by malaise, pyrexia, nausea, prostration and leucopenia. It is therefore advisable to divide the body into at least three divisions for treatment on different days to ameliorate the constitutional effects of the treatment.

Since X-ray reduces cell division, we would expect it to be the most effective in those diseases where there is an increase in mitosis. But this is not the only factor entering into the reaction for in many instances as in the pyogenic conditions there

is an apparently biological change in the tissues which in turn effects the pyogenic cocci. Again, in some diseases as Psoriasis, generalized eczema and Roacea the skin seems to be more susceptible to X-ray than the normal skin.

The most common skin conditions amenable to X-ray is that general group of diseases which we classify as dermatitis and eczema. In the last group we place all the chronic dermatoses which are nondescript in character and in which we are not able to make a definite diagnosis.

In conditions where there is exudation and considerable moisture, the writer has found X-rays to be of small value. We have treated several scores of these acute cases with negative or mediocre results. After the acute stage has passed, there is a protective response which is usually an over production and in these cases, the X-ray works like magic. In a series of one hundred twenty such cases more than ninety responded in a period of one month. One fourth of a skin unit was given weekly and never more than one and one-fourth units were given within a period of thirty days. In eczema of the scalp one must be careful not to give more than one-eighth skin unit weekly and stop when a total of one-half unit has been administered. In our experience, if more than this is required, the condition will respond better to some other form of treatment. Intertrigo usually responds to hygienic measures and soothing applications but occasionally an Intertrigo is seen which owing to macerations and secondary pyogenic involvement is somewhat difficult to relieve. In these conditions six or eight one-eighth units doses has been of considerable value. This is particularly true in the Intertrigo and macerations seen between the thighs and scrotum. The use of more than a total of one unit should not be used on these areas.

While Seborrheic Dermatitis falls in this group, the writer has treated several score of cases without finding X-rays to be of value in this type of dermatitis.

There is one type of eczema in which we have come to believe that the X-ray has a particular value. In the very resistant Infantile Eczema cases, particularly in individuals whose position in society and mentality is such that they cannot follow a rigorous diet, X-ray is the method of choice. We have recently treated nine cases which were resistant and had been under treatment on and off for a period of one year and after application of X-rays these

cases recovered within an average time of five weeks.

The secondary eczematization seen in infectious eczematoid dermatitis is most amenable to X-ray. It is surprising how rapidly these very resistant conditions will clear up after one or two small doses of X-ray.

In Neuro-dermatitis we are able to stop the intense itching and almost invariably heal the lesions within four to six weeks with the use of one-half to one-quarter unit doses of X-ray. But here again, is the X-ray likely to be an abuse, if these cases are treated in a palliative way without determining the underlying conditions which produce the disease.

In Dermatitis Venenata the writer's experience shows that the X-ray is of no value except to allay the itching and perhaps to contribute to the comfort of the patient, but the amount of X-rays necessary to produce a permanent effect has been too great to justify its continued use.

Of the diseases due to pyogenic organisms, Sycosis Vulgaris stands first, Paronychia second and Chronic Furunculosis third as diseases indicating X-ray treatment. Sixteen cases of Sycosis Vulgaris have been treated. The dose being somewhat larger than that for Acne, about one-half skin unit being given every ten days. Four or five cases showed such a marked improvement after a very small dose, we were inclined to believe that the biological reaction of the tissues had in some way been changed. It is interesting to note that the diseased hairs in several instances were epilated with one-half unit, while the normal hairs were not affected. In a series of twenty cases of paronychia, forty per cent recovered with one erythema dose while eighty per cent of the remaining recovered after the second treatment. Eight per cent of the remaining required a third dose and the remaining cases were lost sight of.

Six cases of recurrent furunculosis have been treated with apparently perfect results. Also a number of cases of low grade recurrent infection of an erysipelas nature have been treated with but one recurrence. Four cases of recurrent herpes are so far recovered after a period of ranging from one to three years. However, Chronic Streptococcus Lymphangitis and Chronic Indolent Ulcers have responded less readily and only in about fifty per cent of these have we been able to see promising results from X-rays.

In a recent publication, the writer has

pointed out that above ninety per cent of the cases of Acne Vulgaris respond to X-rays, but since all do not respond, it is an abuse of  $\frac{1}{16}$ -ray therapy to use more than sixteen-quarter units doses in a case of Acne. It may be said here that in a small per cent of the cases that the lanugo hairs are apparently stimulated which however, is only temporary. A temporary increase in pigmentation is another very common complication. In one instance an anetodermie of the back followed a dosage of more than sixteen-quarter units at weekly intervals.

In the writer's experience with Rosacia, Rhinophyma, Acne Varioli formis Carbunculosis, the X-ray has been somewhat disappointing and this agency has been abandoned for other therapeutic measures.

X-ray has not been of much value in the treatment of several hundred ringworms except that it has been very beneficial in clearing up the eczematized patches but the ringworm per se has been little affected by the ray. Along the Gulf Coast, it is almost impossible to treat ringworm of the scalp without epilation, which causes the hair to fall and a spontaneous cure results. In thirteen cases, the average time for the hair to return was thirteen weeks. In one instance the hair grew back curly and had not been so before. In all cases we were able to report a cure. Five cases of ringworm of the beard have been treated in a similar manner with clinical cures. Ringworm of the nails, the writer has treated about sixty cases. The average number of treatments, giving one unit at each treatment to the nail bed. Forty cases have recovered after a period of fourteen months. The writer has treated four cases of Blastomycosis with one and one-fourth unit doses at intervals of five weeks. The lesion had healed after two treatments. Prophylactic doses were given for a period of six months.

Under the granulomas, we may speak of tuberculous skin manifestations. Two cases of Lupus Vulgaris have been treated over a very long period of time without any beneficial results. Four cases of Bazin's Disease have been treated with X-rays with some resolution of the lesions but X-ray has been abandoned in these cases. Of Tuberculosis Verrucosa Cutis and Tuberculosis Oraficialis, we have found X-ray to be an excellent form of treatment. In five such cases we have found an average of three units at intervals of six weeks to be curative. The same may be said of Scrofuloderma. Of the remaining forms of skin

tuberculosis we have found X-rays to be worthless.

In the first two or three attacks of Psoriasis, we have universally found a recovery to obtain after X-ray treatment. After a time these cases become recalcitrant or X-ray fast, and we must resort to other forms of medication. Psoriasis of the scalp responds readily, but is somewhat dangerous as the hair in Psoriatic patients may fall out with four one-eighth unit doses. If two one-eighth units do not show a marked improvement, some other form of treatment is indicated.

In the group of skin conditions classified as naevi and the angioma group, we have discarded X-rays for radium and carbon dioxide snow. Among the benign neoplasms the use of unfiltered X-rays has a place and we have been able to reduce Keloids according to size in from twelve to twenty-four months. Acne Keloid is more difficult because epilation is a constant source of annoyance. In hypertrophic and contracting scarring we have found X-rays to be a very valuable aid in reducing the contraction and softening the scar in two very bad scars following extensive burns.

Regardless of many case reports I believe that the treatment of Hypertrichosis with X-rays is absolutely interdicted because permanent epilation cannot be obtained without some of the bad effects of X-rays.

Cheilitis, we have treated about a dozen cases with about fifty per cent recoveries.

The X-rays in Molluscum Contagiosum, Xanthoma, Lipoma, Multiple Benign Cystic Epithelioma, and Ulcerating Granuloma of the Pudenda need only be mentioned to be condemned as of no value.

It is not the scope of this paper to discuss malignant disease but in a general way it may be said that in treatment for epithelioma with unfiltered X-ray only the basal cell type should be considered. Curettement followed by two and one-half unfiltered units results in a cure in above ninety per cent of cases.

In the treatment of squamous cell type of Epithelioma, except in the very early cases, the use of X-ray very often constitutes a very severe abuse, as many times we are here temporizing at a time when very drastic measures should be followed. In all forms of Melanodermos the use of X-ray is futile except in the so-called Melanotic Whitlow. The use of X-rays in Luke-mia Cutis and in Hodkin's Disease has proven very beneficial in the relief of itching and in the clearing of skin lesions but

the early demise of the patients has precluded an accurate observation.

In conclusion it may be said that X-ray is the most valuable of all the therapeutic agencies in dermatology but it is a very powerful and dangerous remedy unless used with discretion. However, if applied with care and accuracy, it is a most harmless agent. The fact that so many conditions respond to X-ray may oft times be a draw back as the condition may be cleared up without ferreting out the etiological factors in the disease, particularly in those conditions where the etiology is obscure. Again, it is of extreme importance that no skin condition be treated without a reasonably sure or definite diagnosis being made. Unless this is conscientiously adhered to, Erythema Nodosum, Pityriasis Rosea, Lupus Erythematosus, Rosacea, Nevus Pigmentosa, Keratosis Follicularis or similar conditions may receive X-rays to no advantage.

Lastly, X-ray is a very important part of a dermatologists armamentarium but as a general rule never more than one skin unit should be administered within the period of a month and only in exceptional cases should more than a total of four units be administered.

#### DISCUSSION.

Dr. J. N. Roussel (New Orleans): I want to thank Doctor Crutchfield for his very excellent paper. I agree with practically everything he has said. In fact, he has covered the subject so thoroughly that anything I might say about the treatment of diseases in general would be useless. I do want to say one thing, however, and that is this:

I believe that there is one thing about X-Ray therapy of which we are absolutely certain, and that is the fact that it requires at least eleven days for the wave to reach the height of its fury, and it requires another eleven days for it to subside. Therefore, I am opposed to the weekly application of X-Ray at any time. I have been doing X-Ray work for twenty-one years this month.

In the early days we applied the Rays two or three times a week. This kept the condition in a stew, as it were, and those only got well who became disgusted and went home. Then they got well, and of course, they thought, as usual, that the last remedy cured them.

Today we X-Ray a patient and wait three weeks, then we can see results. If you X-Ray a patient today, and again in ten days, the waves overlap, with the result that the lesions do not heal.

Dr. Henry Menage (New Orleans): It is an unusual procedure to begin with the opener of the discussion rather than the writer of the paper, but the statement made by Doctor Roussel about waiting eleven days, and then another eleven days, to get the effect of the X-Ray, holds good only in a certain number and type of cases. In a great many cases you cannot wait three weeks to repeat the dose any more than you could eat a full meal today and wait five days for another.

The paper by our friend Crutchfield is so vast in its possibilities for discussion, he has covered practically the whole of skin diseases, so I cannot add much. I want to say, however, that if I were limited to a certain measure in the treatment of diseases of the skin I would select the X-Ray and give up the others. If I were condemned to treat skin diseases without an X-Ray machine I would give up my job. X-Ray therapy is probably the best single method of treatment that we have for skin diseases. To attempt to relieve the patient—I do not say cure, but to relieve the terrible agony of a patient suffering from incurable conditions—without an X-Ray machine marks the dermatologist as practically antedeluvian.

Dr. Harold G. F. Edwards (Lafayette): I am not a dermatologist; my field is Roentgenology, and I come before you in defense of Roentgen-ray therapy. My observations do not quite agree with those of Doctor Crutchfield as to acute eczema. Probably the reason he is not getting better results with Roentgen-ray treatment is because his doses are excessive or too heavy. It must not be forgotten that the cells in acute eczema are more sensitive than in other conditions. It has been my pleasure to have cases referred to me after they have gone through the pharmacopea of the dermatologist and are still acute. Sub-fractional doses given at ten or fifteen-day intervals have given me results—this is wisely supplemented with a mild lotion such as Dodd's formula.

As for seborrhoeic dermatitis it has been my good fortune to get results.

Carbuncles, if we get them early enough, can be aborted, and as Dunnham says, is one of the zeniths of Roentgen-ray therapy. The pain which the patient suffers disappears almost at once and he gets relief.

Dr. S. C. Barrow (Shreveport): I want to congratulate the dermatologists on the progress they have made in the last few years in adopting the use of X-Rays. Sixty per cent of skin lesions are amenable to X-Ray therapy. That means 85 to 90 per cent of those who come to us in office practice.

I cannot let this pass without making the point that the greatest confusion results from the indiscriminate use of the advertising of the manufacturer. The manufacturers are trying to put into the minds of the medical profession that all they have to do is to buy a machine. We know it takes more than simply the purchase of a machine to treat dermatological conditions with the X-Ray, and if the advertiser were to co-operate with us it would be to our advantage and theirs and there would be less discredit thrown upon X-Ray therapy than there is today.

Dr. Earl D. Crutchfield (closing): I want to take this opportunity to express my appreciation of the invitation to read a paper before this Society, and I appreciate the reception the paper has received.

In regard to acute eczema, in spite of what Doctor Edwards has found and his criticism of our technique, I would say that we have used all forms of dosage for the cases he speaks of.

One other point that Doctor Barrow brought out is particularly good, and that the X-Ray, like the administration of anything else, it is a question of judgment. It very often can be abused, and there is no question that it has been abused in the past. Many people say "X-Ray is no good; it did not cure me." That does not mean that the X-Ray is not good treatment. If properly used it may be the best treatment.

## ENDOCARDITIS FROM THE STANDPOINT OF PREVENTION\*

JOHN B. HOWELL, M. D.

CANTON, MISS.

The rapid increase in mortality from cardiac disease during the past decade, even to the extent of taking precedence over tuberculosis and pneumonia as a cause of death in certain periods of life as shown by the reports of the Industrial Insurance Companies and in the statistics of the registration areas, makes us pause and consider if we are applying our present knowledge of prevention as regards cause and with proper care watching the heart in the acute infectious diseases for the first signs of distress.

It is estimated that two million men, women and children in the United States are suffering with serious heart impairments and that the death rate of these is double the normal.

In a group of wage earner's children between the ages of two and fifteen years, as shown by the Industrial Insurance Statistics, it caused more deaths than did whooping cough or scarlet fever.

After the age of twenty-four there are more deaths among men than women, thus the disease strikes directly at the financial support of the family, and as death is preceded by long periods of sickness and diminished productiveness, from an economic standpoint there is great distress, hardship and financial loss.

This paper will only treat with acute endocarditis as one of the preventable causes of mortality; however, realizing that most observers have drawn attention to the fact that endocarditis does not exist without some myocardial inflammation and that myocarditis does not occur without endocarditis, and at times pericarditis. Though the greater the inflammation in the endocardium, the more danger there is of permanent serious change in the valves; hence, simple endocarditis is the starting point of our chronic valvular lesions and an ultimate cause of death.

Endocarditis is an inflammation of the lining membrane of the heart, which inflammation has a special selection for the valves, particularly the mitral and aortic.

It cannot be regarded as a primary disease, but is secondary to some infectious process or the direct result of circulating toxic products.

\*Read before the Mississippi State Medical Association, Jackson, May 13-14, 1924.

Acute endocarditis, clinically, may be dimalignant or fulminating.

It is divided into two types, simple or benign and

The simple is the most common and the malignant may be regarded simply as a virulent infection; however, Martinet calls attention to the fact that all infections may give rise to either of the types, and it is the soil in which the infection develops which imparts to the process its virulence rather than the infection itself.

Acute simple endocarditis is more commonly a disease of childhood and adolescence than of adult life because the occurrence of rheumatic fever is more common at this period of life.

Denzon has recently recorded three cases of rheumatic endocarditis in children under three years of age. However, it is found during all ages and often appears as an acute manifestation in chronic valvular lesions.

Fully 70 per cent of the cases are of rheumatic origin. Cowan, tabulating 1,750 cases of acute rheumatic fever, from five different observers, found that 53.3 per cent developed endocarditis.

Chorea is second only to rheumatism as a causative factor. Osler states that "there is no disease in which, post-mortem, acute endocarditis has been so frequently found.

Follicular tonsilitis with or without joint involvement is a common cause. There is certainly a close relationship between rheumatism, chorea and infected tonsils. Some believe the tonsil to be the portal of entry for the infecting organism.

Infected teeth and oral infections of all types.

The other primary infections are pneumonia, scarlatina, influenza, erysipelas, gonorrhoea, typhoid fever, tuberculosis and cancer, the latter causing trouble from circulating toxins.

**Morbid Anatomy.** In simple endocarditis there is first a hyperemia behind the free edges of the valves which results in a proliferation of the endothelial and sub-endothelial cells followed by a deposit of fibrinous exudate forming in warty vegetations of varying size.

Resolution may take place and the valve be restored to normal or the exudate may undergo organization causing a thickening or puckering of the valves and retraction producing an insufficient closure or an ankylosis may occur causing stenosis.

The vegetation may be swept away by the blood current as emboli producing infarcts in remote organs.

The valves in the left side of the heart

are the most usually effected, especially is this so of the mitral due to its closure with greater tension and because "its leaflets are subject to a wider range of play."

The auricular surface of the mitral and the ventricular surface of the aortic valves is the seat of the inflammation because they are continuously bathed in the blood current.

The chorda-tendinae are subject to inflammatory deposits and shortening.

In the malignant endocarditis there may be perforation or sloughing of the valves or even perforation of the heart itself.

There may be myocardial inflammation contiguous to the inflamed valves sometimes effecting the bundle of His which will therefore have an influence over the rhythm of the heart.

Aschoff bodies may be found in the myocardium in endocarditis.

**Symptoms.** There are no characteristic symptoms of simple acute endocarditis; however, by massing the symptoms and physical signs a diagnosis can usually be made.

The fever is usually irregular; however, it may simulate intermittent malaria or typhoid.

In rheumatic fever or during other infectious diseases when there is an elevation of temperature without an assignable cause as increased involvement in the joints or other symptoms, endocarditis should be suspected.

The pulse is frequent and often irregular; the irregularity being due to auricular fibrillations or extra-systole, and some observers believe that inexplicable palpitation during acute illness to be a distinct symptom of endocarditis.

Dyspnoea is a strong symptom, especially if this comes after exercise or a hearty meal.

Pain in simple endocarditis is not common except when it is associated with pericarditis. At times a precordial distress is present and in children the pain may be referred to the epigastrium.

Pre-cardial tenderness is sometimes present in nervous individuals, also pallor and giddiness on exertion.

**Physical Signs.** There may be little noted, on inspection, except at times a displacement of the heart to or beyond the nipple line and the cardiac impulse may be forcible or wavy with pronounced apex beat.

On palpation the pulse is found rapid and sometimes irregular. In auscultation there may at first be only a muffled valvular



lar sound followed by an accentuated second sound. Later the systolic blowing murmur heard best at the apex, and when organic transmitted to the left into the axilla.

**Prognosis.** There is no disease in which the prognosis should be more guarded, for a seemingly harmless and apparently mild attack may leave a seriously damaged valve which means in some cases semi-invalidism.

The convalescence must necessarily be slow and the patient remain in bed for a long period of time, in some cases three to six months. However, time is no object compared with the future welfare of the patient.

**Treatment.** The treatment of endocarditis may be divided into curative and preventative. There is no curative. However, there is hope that there will be advancement made in intravenous therapy in the malignant types, and here our biologic chemists have a rich field for experimentation without doing any more harm to the patient than the disease.

It is a recognized fact among clinicians that the majority of cases of acute simple endocarditis are preventable, and in the second place when there is a developed endocardial lesion that by proper care the process may be limited in its damaging effects and the valves saved from permanent disablement.

There is need of a wider general education among school children and the public at large regarding the causal relationship between focal infection and heart disease and more instruction in personal hygiene and care of the heart in rest and work, with special reference to occupation, and in this to fit a man's occupation to his heart capacity.

The routine examination of children of school and pre-school age by competent medical men should grow into a general practice and many of the heretofore neglected and undiscovered foci of infection in the upper respiratory tract and mouth be found and corrected.

Here, too, the incipient valvular defects may be found, and the patient be directed in a proper mode of living as regards diet, exercise and habits which will prolong life.

The causal relationship of rheumatism, chorea and follicular tonsillitis to endocarditis cannot be too strongly emphasized here. I speak of rheumatism in its broader sense, with its protean manifestations of growing pains, wryneck, general myal-

gia and inflamed joints, all cry out to us to look for the cause, remembering that they may be followed by endocarditis.

In rheumatic fever, chorea, pneumonia, scarlatina and the other infectious diseases the heart should be examined daily.

It is the duty of the physician to be diligent in apprehending the first symptoms of trouble, and when the disease is established to limit the process and prevent the destructive changes in the valves and myocardium. This is best accomplished by rest in the recumbent position, not allowing the patient to raise or turn without assistance.

Both the patient and the family should be apprised of the seriousness of the disease as regards its disabling sequellae, thereby gaining their co-operation which is so necessary for a successful management of the case.

The bodily rest is of no greater importance than that of the mental, and all emotional excitement should be avoided.

Should the heart be rapid, the use of the ice bag as a sedative is indicated.

The diet should be given at regular intervals, and of well selected foods and to avoid intestinal distention, the bowels should act daily.

The patient should sleep at least ten hours in twenty-four and during the waking hours, if possible, be in the sunshine and fresh air.

Intravenous salicylates and alkalis when the disease complicates rheumatic fever is of some value.

Morphine in small doses may be used in cardiac distress or when the heart is weak and blood pressure low and the patient apprehensive.

The ferrigenous tonics and green vegetables to forestall the anemia may be given.

Autogenous vaccines may be tried, but from the investigations of Billings they are of very little real value, at least they are not constant in their results.

The patient should be made to co-operate and, by encouragement, kept from depression.

In convalescence the progress to the horizontal position should be gradual and when up and walking the action of the heart should be observed.

In conclusion to summarize: There is an increasing mortality and morbidity in heart disease.

Prevent the advent of endocarditis by clearing up the focal infection of the

mouth and throat by removal of diseased teeth and tonsils.

In rheumatic fever, remembering that 50 per cent of the cases are complicated by endocarditis and the rheumatic heart is a potential heart for trouble.

Prevent endocarditis and you prevent chronic valvulitis.

#### DISCUSSION.

Dr. Hiram G. Williams (Prentiss). I think I would be unfair to you if I did not make some statement in regard to rheumatic endocarditis. I feel that there is a weak point among the general practitioners, their inability to recognize this disease early. I have had a good deal of experience in the last few years; in fact, the disease visited my home, and I feel after careful observation that I can say that this disease is an infectious disease originally, either of arthritic or rheumatic origin, and perhaps tonsils and bad teeth may cause some of it. The malignant type we get more commonly in children, and especially in girls, and my observation is that it is most commonly found in girls from five or six, to twelve or thirteen. I am speaking of the type that gives us so much trouble. This disease should be recognized early and the patient referred to a tonsil specialist or a dentist immediately.

In one of these cases of mine the child in which two teeth were taken out two days before the child died, after it had been sick for three or four months. Those teeth were found to be abscessed.

In the diagnosis of those cases associated with rheumatism we get distinct arthritis in a majority of cases. In the typical case we get nodules above the elbow and near the knee joint in front, and at postmortem we get Acoffs bodies in the valves of the heart. When these Acoffs bodies are found the case is always fatal.

The streptococcus veridans is the primary cause evidently of acute rheumatic endocarditis. If we suspect these cases a culture of the blood should be made by a competent laboratory man to see the nature of the infection. In that way we are able to reach much more definite conclusions than would be otherwise possible. We get an enlarged liver and weakness of the heart, and of course we get a myocarditis, also various heart sounds, and pain of the heart and left arm. We get an enlargement of the spleen, and a general febrile state, rather indefinite. In these cases the patient may last two or three, or even six months. On the contrary, if recovery takes place it is more gradual.

With regard to diet, I do not think it should be too concentrated, but should be well selected. The patient should be kept quiet in bed. I am not sure about the ice bag; I have never gotten results from it.

In regard to treatment, the primary treatment is elimination of foci of infection, and I believe if we get these cases early we should give large doses of salicylates. I regret that in one or two cases I did not give large enough doses. We give

5/10 gram ( $\frac{1}{2}$  gm.) of salicylate for each kilogram of body weight daily. I have a patient now, a young woman 27 years of age, who is practically convalescent. She has been taking salicylate of soda about six weeks, as high as 180 to 240 grs. daily at first. She is taking 45 grains a day now. She gets sodium cacodylate by hypodermic every 3 to 5 days now. She has had no fever for four or five weeks. When I first saw her she had a complete arthritis with evidence of endocarditis. Whether she responded to the rest or the treatment I am not sure, but she is convalescent, and I believe will get well.

If a patient has an obscure fever with an irritable heart, and any pain in the body, be suspicious of arthritis and impending endocarditis, and immediately put that patient on large doses of salicylate. If that is done I am sure we will save many lives that would otherwise be lost.

Dr. Whitman Rowland, Jr. (Oxford): The prevention and care of endocarditis lies definitely in early diagnosis. The essayist has given a very adequate outline of the method of handling those cases, and I simply want to bring forward a few points that might be of value in the early diagnosis of the condition.

First, I would mention a definite familiarity with the diseases with which myocardial and endocardial involvement are associated. Recognition of the diseases with which heart infections are frequently associated stimulates frequent and careful examinations of the heart. In a child definitely infected with certain diseases it is the duty of the careful clinician to keep watch of the heart. An early sign we notice, and a most valuable sign, is a change in the character and rate of the pulse. It is difficult to ascertain in a child because the cardiac mechanism is illy balanced, subject often to nervous influences, and it is difficult to detect a change in pulse rate. It cannot be detected by counting the pulse for a minute. Palpation of the radial pulse or the carotid in the supraclavicular region of the neck for five minutes will some times give indication of a change in pulse rate which may indicate early involvement of the myocardium.

We have found that one of the early indications of myocardial involvement is a disturbance in cardiac rhythm, manifested by premature contractions. The term "extra systole" is a misnomer, because it implies an extra systolic contraction, and this does not occur. The heart beats along regularly. suddenly a contraction occurs out of time which is premature. That systole is not extra, it is premature, so the term "extra systole" is a misnomer. The occurrence of premature contractions is one of the early symptoms of myocardial involvement in a child.

Another symptom of value is a change in the position of the apex beat. Early in the disease it moves outward. Any indication of ventricular dilatation is indicative of myocardial involvement and should be looked upon with great suspicion.

In regard to treatment, drugs as such have little place. As to the use of salicylates, these cases are frequently associated with an acute nephritis. It has been demonstrated that large doses of salicylates increase the irritation of the kidneys and perhaps it is better to rely altogether on rest. That is the thing that gets them well. They do not get well in two or three days, but as the essayist has said, it may take months. Time is not to be considered. With proper rest in bed a large percentage will recover from the acute condition, and by proper rest you may prevent trouble in later life.

Dr. N. S. Stern (Memphis, Tenn.): This ques-

tion has been taken up from the point of view of prevention, and in order to prevent we must understand the etiology of endocarditis.

The point of view of the rheumatic type of heart disease has been thoroughly discussed, but there is one thing that has struck me of late years, and that is the relatively small amount of this type of disease in this part of the country. If you go to the north, to the east, to the coast, you find a great deal of rheumatic endocarditis. In the Middle West and South you will find relatively little. I have been interested in the point of view of the etiology and incidence of the causative factor, in the Memphis General Hospital. In the past two years there have been 10,000 admissions, and there have been 9 cases of acute rheumatic fever. Furthermore, we have been watching the hearts of children and adults there for some time, and have found extremely few definite rheumatic hearts which come from the tonsils, and certainly there are plenty of tonsils taken out there, as everywhere in this country. They are taken out for definite indication, but very few hearts are involved. Evidently there is some difference between this part of the country and Chicago, New York, Boston and Philadelphia, where endocarditis is more frequent. A recent study of over 100 cases has shown that the rheumatic type of heart is rather rare. This, I believe, is a point that has not been brought out.

The type of heart disease that we do find most commonly is that associated with high blood pressure and general arteriosclerosis, but since this type is not associated with endocarditis except perhaps in the last stage, we will pass it by.

There is one definite type to which I would like to call attention, and that is syphilitic endocarditis. It comes between the age of 35 and 50, usually 15 to 25 years after the primary infection. The disease first manifests itself ordinarily by dilation of the aorta. Careful percussion will sometimes suggest this, and X-Ray studies will confirm it. If you watch the heart carefully at this period you may find the murmur of regurgitation which is characteristic. If you take the condition at this time you have an excellent chance to cure it. If, however, you let it go on, it will develop fairly rapidly, symptoms of heart failure will supervene, and in three or four years you will have lost a patient. But if you take these patients at the time that these murmurs start, or before, when the condition is just beginning, and treat them thoroughly for syphilis you will sometimes stop the advance of the condition and save your patient from a cardiac life later.

In the treatment of this condition it is well at first not to use the arsenical group. This group tends to rather rapid absorption of the syphilitic tissue which would certainly increase the valvular lesion and leave the patient worse than before. I believe you should treat him rather thoroughly with mercury because that has a tendency to absorb the luetic tissue more slowly. In other words, there is less destruction of the valve from treatment and better results in the long run will follow if you give thorough treatment with mercury first and then with the arsenicals.

Dr. J. B. Howell (closing): I thank the gentlemen for their discussion. I thought I had said that any ——— joint manifestations should be watched. While formerly it was not supposed to have much influence on the endocardium, I think it now does have considerable influence as a cause in these cases of endocarditis.

## LEADING FACTORS CONTRIBUTING IN THE CONTROL OF TUBERCULOSIS, WITH REFERENCE TO INSTITUTIONAL REQUIREMENTS FOR THE STATE OF LOUISIANA\*

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NEW ORLEANS

In accepting Dr Ellis' gracious invitation to present to this section a paper on the subject of tuberculosis, I thought that you might be interested in the discussion of the practical anti-tuberculosis measures that are accepted by phthisiologists, as the leading factors contributing in the decrease of the morbidity and mortality of tuberculosis.

Twenty years ago a small group of men organized the association known today as the National Tuberculosis Association. The objects of this association are well founded, and we can justly accredit the National Tuberculosis Association with promoting the earlier anti-tuberculosis drives. However, from the list of members in this association who register from the state of Louisiana, it is clearly seen that we have failed to avail ourselves of the scientific and educational advantages offered by the National Tuberculosis Association. I do trust that the physician who is seriously interested in the subject of Tuberculosis will feel assured, that the Transactions of the National Tuberculosis Association and the Tuberculosis Review are valuable assets in any physician's library, and are as indispensable as the American Medical Association and Southern Medical Association Journals.

Although the study of Tuberculosis in all its forms and relations is a broad and intricate subject, we can at least seek to acquire a limited knowledge of the pertinent facts that enter into the solution of the difficult problems pertaining to the cause, prevention, diagnosis, treatment, and eradication of the disease.

When Prof. Koch permanently established the fact that the development of tuberculosis in man, is the result of the invasion of a more or less virulent type of tubercle bacillus upon the body of an individual whose tissues have been more or less lowered in their resistance to infection, it was thought that the disease would be eradicated in a few years. Unfortunately, the world was not to be so blessed.

\*Read before the Louisiana State Medical Society, Opelousos, April 22-24, 1924.

It is only in the past few years that we have begun to visualize the numerous and varied sources through which the attacking foe, the tubercle bacillus, may find its way to man's vital organs.

A tuberculous infection in man results chiefly from the inhaling or ingestion of the human type of tubercle bacillus, which is always present in the sputum and secretions emanated by every case of "open" tuberculosis, whether it be "active" or "latent."

The bovine type of tubercle bacillus is held responsible for about twenty per cent of infections, particularly in children.

The acquiring of the preceding knowledge has led to the final recognition of tuberculosis as an infectious and communicable disease, therefore reportable and coming under the jurisdiction of the various rules and regulations of the Board of Health.

Being the finding of tuberculosis is the first step forward in the control and eradication of the disease, the reporting of all cases of tuberculosis showing bacilli in the sputum or other secretions, is a very helpful means in determining the location and distribution of tuberculosis in a community. Unfortunately, cases are reported in many instances, only when the patient has reached the final stages of the disease.

With the establishment of the visiting nurse as an indispensable asset to our Boards of Health and Clinics, the reporting of a case of "open" tuberculosis should mean more to the physician than the mere recording of such a case. If a physician does not condescend to report his cases, he should at least be conscientious enough to shoulder the whole burden and responsibility in applying the more important prophylactic measures, such as the proper use of paper-napkins and sputum-cups when the patient coughs and expectorates, and especially should be given full instructions about house hygiene and personal cleanliness, and in the boiling of all table utensils used by the patient.

By so doing he will minimize and prevent the spread of the disease to other members of the family, and principally to the children of the community. The latter is very important, for the majority of cases of adult tuberculosis are nothing more than the aftermath and flaring up of a tuberculous infection contracted during childhood. The one who fails to report his cases of "open" tuberculosis, deprives our health authorities and anti-tuberculosis agencies

of valuable information; and the consequence is, that the visiting Health Nurse does not reach the threshold of the infected domicile, and the patient's immediate relatives and friends are kept in utter ignorance of the dangers to which they are being subjected, and are deprived of valuable aid and advice, which in many cases means the welfare of not only the patient, but of his family, if not of the entire community.

Next to be considered in the program for the eradication of tuberculosis, is the undertaking of extensive community medical examinations, carried on under the auspices and supervision of private and public clinic staffs; private and public school medical examiners; as well as by our civic and industrial medical units.

The systematic examination of all employees in factories and other places of industry; of all civic employees and school children; and in fact of all our population, by competent medical men well versed in the diagnosis and treatment of tuberculosis, will be a means of detecting the disease in its incipiency, and thereby warding off the danger of the disease being communicated to others.

Coming hand in hand with the above, is the persistency of our health agencies in demanding the promotion of such health activities, as thorough statistical and sanitary surveys; thereby enlightening the community upon existing conditions, and also giving the location and distribution of all infected cases, with the areas of filthy and unsanitary dwellings and environs.

The finding of the "open" case of tuberculosis is particularly important and interesting; however, if possible, we should endeavor to go a step further in order to determine the spread of the "infection" in the community. This we can do with the administration of the tuberculin tests—not limiting the tests to cattle, but applying it to all members of the community, primarily our children population.

This suggestion I know many will call "ultra exaggeration." Yet, how are we going to determine the spread of infection in a community, unless through the detection of the number of cases reacting positively to the tuberculin tests? Certainly, the cases who present only an "infection," are not such vital factors in the spread of tuberculosis, as those who have bacilli in the sputum; but the detection of their deficiency, i.e., their tuberculous state, is a valuable asset in mapping out a "mode of living" and a proper environment that will remove

the sword of Damocles which hangs overhead of all such cases. True, they are not diseased so far as the manifestation of symptoms is concerned. However, do we know when this state of simple infection will develop into one of virulent disease?

The advocates of race immunity against tuberculosis, contend that the greater part of mankind, who in childhood or later on, have been exposed to infection, do not suffer from tuberculosis as a manifest disease consequently, the reduced prevalence of the more morbid forms of phthisis. This may be to a certain extent, but it is not a proven and established fact.

Personally, I would rather see my community absolutely free from tuberculosis, be it "infection" or "disease," than to have the present conditions with such prevalent morbidity and still high mortality.

Recently we are hearing such statements as the following: Why so much talk about tuberculosis? The mortality of tuberculosis has decreased fifty per cent in the last twenty-five years, and will continue to decrease, for the disease is weaning itself away from civilized centers and populations that have shown a high death rate for several generations.

This prophecy is based upon too flimsy evidence, and the author for one will urge all of you, not to discourage or abandon the noble workers that have labored incessantly in developing the anti-tuberculosis crusade. It may take more than one generation to accomplish permanent results, but let the work go on by all means, until the disease has been completely eradicated.

Reports from the Framingham Demonstration, and from New York and other states, show that from one to two per cent of a typical American community will present manifestations of "active" tuberculosis, and another one per cent will be tabulated among the "arrested" cases.

Forty to ninety per cent will show only a tuberculous "infection," while five to ten per cent are eventually going to die of tuberculosis. Does this demonstrate that the disease is weaning itself out? Apparently not.

Having found tuberculosis, we should have at our command, practical measures that when applied directly or indirectly, will affect the future morbidity and mortality of the disease. It is pleasing to mention that our Health, Hospital, Anti-Tuberculosis, and Civic institutions in New Orleans, have recently contributed a leading

part in the maintenance of clinics and nursing facilities in tuberculosis.

I have already mentioned the importance of the work done by the Public Health, Clinic, School, Social, and Industrial Nurse; and I will venture to state that more effective work can be accomplished, if the nurse was better equipped with the knowledge required for the carrying on of the various intricate measures which are so necessary to solve the many difficult problems that confront the tuberculosis worker. We cannot expect a nurse supplied only with a limited knowledge and equipment, and meager medical assistance, to accomplish much in any community; either in the detection of "active" tuberculosis, or in the direction of patients in their mode of living and application in treatment. The supervision of a physician with a thorough knowledge of the prevention, diagnosis, and treatment of tuberculosis, and especially interested in the welfare of the tuberculous, provides the strong link to the defective chain, as evidenced by the good work done in some clinics, schools, and factories. This will permit the detection of a greater number of cases of tuberculosis in the earlier stages, and allow a better and more effective assignment of cases for advice and treatment. We must admit that it is difficult, at times, to procure the services of a physician who has any intimate knowledge of tuberculosis; and we shall meet with this shortening, as long as our medical schools persist in ignoring the true conditions, and refuse to give their students better facilities and more practical instructions in phthisiology.

Adequate and competent medical machinery and nursing facilities, are most essential to carry on the success the many departments which are provided, either for the detection and prevention of tuberculosis, or for the re-establishment of the diseased tuberculous to a normal health state.

Whether it be the Tuberculosis Clinic, Sanatorium, Hospital, Child Welfare Service, Industrial Medical Unit, the medical officer in charge must have some general knowledge of tuberculosis, in order to recognize the disease in its "minimal" stage, either in the "active" or "latent" state. He should be able to impart to his patients the true nature of the existing illness, while always giving an encouraging statement. He should be firm in his orders, and considerate of the individual's personal and financial ability to carry out instructions.

How ridiculous it seems to tell the sole supporter of a large family, that he must quit work and go to some climatic resort for rest in the open air, eighteen of the twenty-four hours—and then without worry; when poverty stares him in the face, and he has no sleeping porch facilities at his command; or, to tell the restless, uncontrollable and careless young miss and lass, that they must rest from breakfast to supper, and are expected to do so of their own volition and without the constant watching of some disciplinarian.

The Private Office or Clinic, for the "home-treatment" of ambulant cases; the Sanatorium, for the treatment of "minimal" and moderately "advanced" cases; and Hospital, for the care of the "far-advanced" cases, are three institutions which we will need for many years to come, though some believe that the utility for such institutions has about passed. All three play a prominent part in the educational program of tuberculosis, and no doubt have contributed their share to the decrease in the morbidity and mortality of tuberculosis.

It is unfortunate that we have been so slow in establishing such institutions in Louisiana—the Breaux Building of the Charity Hospital in New Orleans, remains the only tuberculosis institution under the control of our State Department. New Orleans, with its population of four hundred thousand inhabitants, should have sanatorium and hospital bed facilities for approximately 275 white and 350 colored tuberculosis patients; and the State similar facilities for approximately 350 white and 850 colored tuberculosis patients—in order to meet the requirements and needs of the number of cases that require institutional treatment.

Let us hope that the coming Legislature will follow the striking example of our neighbor—the State of Mississippi, and will establish Tuberculosis State Sanatoriums and Hospitals, that will meet the needs of at least fifty per cent of our tuberculosis population.

Presuming that some one might raise objections to the establishment of tuberculosis sanatoriums and hospitals in our Louisiana climate, thereby attach results reported by the Dradom Tuberculosis Sanatorium, at Covington, Louisiana, showing conclusively that, with proper care and application, results in the treatment of tuberculosis are as favorable in our balmy

climate of Louisiana, as in any other section of the United States.

With the establishment of a greater number of private and public clinics, sanatoriums, and hospitals, not only will a large number of our tuberculosis population, who at present are doomed to a premature death from the lack of proper care and treatment, will be benefited; but many disabled tuberculous will be returned to the State as wage earners and assets to their community. Tuberculosis will then be detected in its "minimal" stage, and the prompt administration of the hygienic-dietetic and "accessory" treatments, will practically benefit one hundred per cent of the cases under the supervision of these Institutions.

Does our surveillance and duty to our patient cease when we find him free from any of the physical, clinical, or laboratory findings, that were present during the "active" period of his illness? Certainly not. We must not overlook that "man's resistance to infection"—that body function whose veil of mystery scientists and phthysiologists are strenuously endeavoring to lift, in order to determine the true nature and relation of immunity to infection—plays an important part in the prevention of tuberculosis, as well as in the averting of a "relapse."

The real test showing the curative value of the Clinic, Sanatorium or Hospital is: What percentage of patients stay well after returning to their work or occupation?

With the improved working conditions in our factories and business places; with fair earnings wages and betterment in the well being of our working population; with a clearer enlightenment and understanding prevailing between employer and employee, and above all, with the establishment of industrial and farming colonies in the St. Tammany Ozone Belt and other salubrious sections of Louisiana—where the "Quiescent" or "Arrested" cases can avert a relapse by working under proper medical supervision, yet being self sustaining—we will find that the money spent by our State and Civic Institutions, and nobly contributed by our Philanthropists, will repay this great republic a hundred fold by removing from its midst a scourge that undermines the health of its population.

1923 *Report of the Dradom Tuberculosis Sanatorium, Covington, La.*

The two hundred and twenty-seven cases of Plumonary Tuberculosis treated from

1905 to 1920 and herein reported, were classified according to the Scheme of the National Tuberculosis Association, as follows:

*Minimal Stage (P)*—30 cases.

*Apparently Cured*—30 cases or 100 per cent.

With 10 cases of 33.3 per cent at work 10 to 15 years following discharge from treatment.

With 20 cases or 66.7 per cent at work 3 to 10 years following discharge from treatment.

One of the above cases died of Paresis 16 years following discharge from treatment.

*Moderately Advanced Stage (P)*—84 cases.

*Apparently Cured*—77 cases or 91.6 per cent.

*Quiescent*—6 cases or 7.2 per cent.

*Improved*—1 case or 1.2 per cent.

With 27 cases or 32.2 per cent at work 10 to 15 years following discharge from treatment.

With 48 cases or 57.2 per cent at work 3 to 10 years following discharge from treatment.

With 1 case or 1.2 per cent condition uncertain, 10 to 15 years following discharge from treatment.

With 3 cases or 3.6 per cent condition uncertain, 3 to 10 years following discharge from treatment.

With 4 cases or 4.6 per cent dead from tuberculosis, 3 to 12 years following discharge from treatment.

With 1 case or 1.2 per cent dead from ether anesthesia, 2 years following discharge from treatment.

*Far Advanced Stage (P)*—113 Cases

*Apparently Cured*—24 cases or 21.3 per cent.

*Arrested*—1 case or .9 per cent.

*Quiescent*—44 cases or 38.9 per cent.

*Improved*—35 cases or 30.9 per cent.

*Non-Improved*—9 cases or 8 per cent.

With 12 cases or 10.6 per cent at work 10 to 15 years following discharge from treatment.

With 18 cases or 15.9 per cent at work 3 to 10 years following discharge from treatment.

With 5 cases or 4.4 per cent condition uncertain, 10 to 15 years following discharge from treatment.

With 10 cases or 8.9 per cent uncertain, 3 to 10 years following discharge from treatment.

With 25 cases or 22.1 per cent dead from

tuberculosis, 2 to 6 years following discharge from treatment.

With 40 cases or 35.4 per cent dead from tuberculosis, 4 months to 2 years following discharge from treatment.

With 3 cases or 2.7 per cent dead from nephritis 1 case, pneumonia 1 case, and child birth 1 case, 1 to 4 years following discharge from treatment.

The primary cause in the 69 deaths from tuberculosis was as follows: Pulmonary Tuberculosis 53 cases, Pulmonary Hemorrhage 2 cases, Diabetes 2 cases, Empyema 2 cases, Laryngeal Tuberculosis, 5 cases, Intestinal Tuberculosis 5 cases, Abscess of the Lung with Surgical Drainage 1 case.

No case under treatment less than four months was included in this report.

The duration of treatment varied from four months to three years, depending upon the status of the patient, and the stage of the disease.

DISCUSSION.

Dr. J. E. Knighton (Shreveport): About two years ago I brought before this Society a paper dealing with some of the problems to be settled by the medical profession in co-operation with the public. One of these problems was that of tuberculosis, and some of the things I said in that paper were strictly in harmony with the suggestions that Doctor Durel has brought out in this paper. I am glad to hear that same note sounded again. I at that time called attention to the fact that our neighbor State of Mississippi was spending two and a half million dollars for the building and maintenance of a tuberculosis hospital. Our State certainly should do for our tuberculous poor and indigent what our neighbor State is doing. It is tragic, indeed, it is criminal, to say to an individual that he must go away to a high, dry climate, among strangers, and frequently among an unsympathetic public—to suffer and die in an attempt to maintain himself under these conditions. We should keep our people at home and treat them at home and give them a chance to get well and live among friends and in their normal environment.

Dr. Oscar Dowling (New Orleans): I have some statistics pertaining to this paper which Doctor Durel asked me to submit.

When a case of tuberculosis is reported it is required that the health officer visit the patient and explain the rules and regulations regarding the disease. Cases—many of them—should be isolated, but where shall we isolate them? The only place we have is the jail, and I do not see any more reason why a man with tuberculosis should be confined in jail than a man who is insane. I do not believe they should go there. Act 42 of 1880 says that the State shall provide for the indigent poor.

The statistics for pulmonary tuberculosis, exclusive of New Orleans, for the past six years, are a matter of record in the office. They are as follows:

	Deaths
1916.....	324 1,369
1917.....	334 1,500
1918.....	322 1,964

1919.....	286	1,514
1920.....	555	1,616
1921.....	2,144	1,414
1922.....	1,011	1,388

In 1922 and 1923 there were taken from the death certificates, respectively, for which no reports were made, 424 and 810, a total of 1,234. When we come to the distribution in districts for a period of six years (1916-1921), taking one parish from each Congressional district, we find the following.

Parish	District	Cases	Deaths
Plaquemine.....	First....	28	79
Jefferson.....	Second..	47	154
Lafayette.....	Third...	84	242
Caddo.....	Fourth..	344	1,030
Ouachita.....	Fifth...	81	287
E. Baton Rouge.....	Sixth...	165	515
Calcasieu.....	Seventh..	73	258
Rapides.....	Eighth..	1,354	588

Dr. J. Geo. Dempsey (New Orleans): The subject of Tuberculosis in the State of Louisiana I think has been properly assigned to the Department of Public Health, but it is unfortunate that we should have such a small audience present here today.

If the people of the State fully appreciated the importance of this subject in connection with the preservation of life they would certainly manifest a greater interest in it by being present at all times when the subject is brought up for discussion. It is a matter which should be given wide publicity, for it is of national concern and has been such ever since it was first discovered as a disease.

In the year of 1922 there were 2,055 deaths throughout the State from pulmonary tuberculosis.

In 1923 there were 1,945 deaths from this same disease. Looking at the figures compiled by the Vital Statistics Department of the Louisiana State Board of Health, we see that during the year of 1923 lobar-pneumonia, broncho-pneumonia, and pneumonia undefined increased.

In other words, the decrease of pulmonary tuberculosis in 1923 is not because tuberculosis has decreased, but because many of the cases of tuberculosis developed pneumonia of some form and certificate of death given thus.

Doctor Durel is to be congratulated on his paper. Tuberculosis comes under the head of the educational system, clinical system and institutional system. The number of cases of tuberculosis in the United States today cannot be taken care of by the tuberculosis institutions alone, so consequently we must look to the general hospital for assistance.

Prepare your hospital annexes by having special wards set aside for the treatment of this disease.

Dr. Wallace J. Durel (closing). Regarding the segregation of tuberculous patients, I must say that I have fought this matter for twenty years at every meeting of the Medical Association. The segregation of patients would lead to a state of phthisiophobia, even among the medical profession, and it is bad enough that our medical students do not come to the Charity Hospital tuberculosis wards for fear that they will contract tuberculosis. If such conditions exist among those who should be better enlightened, what can we expect of the public? Primary infection in tuberculosis occurs during childhood in a great majority of cases, therefore the separation of the

smaller children from their infected parent, especially if the latter is unwilling to take proper prophylactic measures against the disease, is essential to prevent infection in such children. What appear at present important factors in the anti-tuberculosis crusade is the better instruction and education of our medical students and of the profession in the different anti-tuberculosis measures. Through the latter the education of the lay public and of the tuberculosis case will necessarily follow. We should provide means for the treatment of cases in different stages of the disease, and also means for the prevention of relapse in these cases. Our motto should be, 'Not only to make these patients well, but to keep them well.' I do not think that the struggle for the eradication of tuberculosis should cease, but feel that we have only started.

## TREATMENT OF PUERPERAL SEPSIS\*

S. H. HAIRSTON, M. D.

MERIDIAN, MISS.

There are a great many diseases that would be far better off if they had no treatment at all. When a patient sends for us he expects us to do something and will become dissatisfied if we do nothing. The assurance that nothing can be done is not enough. We can do something but it is our good judgment that what we do is not going to do harm to the patient. It is often the desire to satisfy the minds of the family rather than do what we know to be right and what our conscience dictates.

This is especially true in treating puerperal sepsis. The patient is running a high temperature and is having a foul smelling discharge. The family are anxious and many a kind friend is suggesting some other doctor. We have all experienced the feeling of restlessness that exists in the entire household. The doctor's desire to do something to relieve the situation will often lead him to suggest the harmless douche, intra-uterine or vaginal. He has the remorse of conscience that tells him he is not doing the proper thing. To my mind the douche is the most dangerous thing he can do at that time. It is even as bad as giving salts pills or injections in an acute abdomen.

I have only one thought to bring to you today, and I only want to call your attention to but one phase of this subject. I have nothing new to offer. If we would talk about old subjects more we would be more potent factors for good. Let us not devote too much time to new things or rare cases. If we discussed appendicitis more there

\*Read before the Mississippi State Medical Association, Jackson, May 13-14, 1924.



would be a lower mortality rate, less appendicular abscesses, and a shorter convalescence. If we would discuss osteomyelitis more there would be fewer one limbed children in the country and fewer cripples. If we discussed empyema more there would be fewer lungs destroyed and fewer children going about on one flat. If we discussed puerperal sepsis more there would be less work for the surgeon, less lives lost, more pus tubes prevented, and a stronger motherhood. It behooves us to study with ever increasing interest the problems that come up in our every day practice.

You will ask the question, what are we going to do with these cases. Our first thought is to curett and remove the offending material. Under no circumstances do I enter the uterus unless there is a threatening hemorrhage, and I do it then with a pair of placenta or sponge holding forceps. I only remove the remaining membranes and then come out as quickly as possible, with the least amount of trauma to the mucosa. Again, under no circumstances do I use an intra-uterine douche and not even a vaginal douche in this condition. After the remaining membranes have been removed with as little trauma as possible, in the hemorrhage cases, I turn my attention to treating any symptoms that may arise and leave this part of it alone.

To my mind the curett is a very dangerous instrument to use in these cases. It not only traumatizes the uterus but opens new avenues for infection by opening anew the blood and lymph channels. The douche does the same thing only in a smaller way. It may carry the infection in the tubes and out in the abdomen with all its resultant effects. The infection is already inbedded in the lymph channels of the uterine wall and the perimetrium. You can readily see that the douche is worse than useless. To my mind it is about time for the curett and the uterine douch nozzle to be relegated to the museums as instruments of the pre-scientific age.

With the advent of radium and deep X-ray therapy and other modern methods men over the country very rarely curett for diagnosis. It is extremely dangerous to curett for diagnosis unless you are prepared to make an immediate diagnosis from frozen sections and do what ever operation necessary within ten minutes. The practice of doing a curettment, sending the specimen away to a laboratory, and if necessary operate two weeks later is a practice that ought to be discouraged. Cancer cells can be turned loose and a

dangerous and fatal metastasis can take place in that length of time.

In my earlier work I tried all the methods that have been recommended from time to time. I used the curett with iodine swabs, anti-streptococcic serum, douches, intra-venous medication, etc., and they seem to be of no particular value. Some of the cases got well in spite of my treatment, some died and others had to have their tubes removed later, and still others had a period of long convalescence and were in a condition of semi-invalidism for some years there after.

After a considerable experience with all the methods of treatment I have come to the conclusion that rest in bed, plenty fresh air, and water, keep the bowels freely open, a nourishing easily digestible diet, is about all the treatment that is of value. If you will go no further than this you will find that more patients are going to get well and in a shorter length of time than by any other method of treatment. If the patient runs a high temperature, and seems prostrated, and carrying a heavy load of toxemia, plenty sugar of milk with fluids by mouth, or soda and glucose by drip, or an intravenous glucose drip, will protect the proteid molecule, counteract certain auto-intoxications, relieve cloudy swelling of the emunctory organs and thereby increasing elimination.

For the past eight years it has been my good fortune to be connected with one of the large charity hospital of the state. Here we could carry out what ever treatment we desired without any interference from the family. Our records will show and I am fully convinced that the best treatment we have at our command today is to treat the symptoms as they arise and leave the rest alone.

#### DISCUSSION

Dr. C. C. Hightower (Hattiesburg): If there is any class of case where you can be of great service it is in puerperal sepsis, if you begin at the right time. I want to explain my method of handling these cases. I had a case that I treated less than two months ago, a woman sent to the hospital five days after labor. She had a temperature of 104; white blood count 27,000; polys about 130; tenderness over the pelvic region. I think almost anyone would call that puerperal sepsis. There might be some distinction between puerperal \_\_\_\_\_ and puerperal sepsis, but it is my belief that there is no such distinction, that you find puerperal \_\_\_\_\_ in the beginning stage of puerperal sepsis. I examined this woman and there was no discharge at all. I cleaned the vagina out with bichloride solution with a sponge holder, and then I took uterine dressing forceps and cleaned the cervix out thoroughly. This was all done without an anaesthetic. Then I entered

the uterine cavity with the uterine dressing forceps and there was a discharge of white, creamy pus. I do not believe in curettage, either. I took a sponge on the end of placental forceps and gently swabbed the uterus out with bichloride solution 1 to 2,000. I did nothing after that—did not leave any packs in the vagina or cervix. The next morning her temperature was down to 100 and she was feeling much better. Next night the fever went up to 104 and she had a high pulse rate and high blood count. The following morning I did the same thing, and more pus came out of the uterine cavity. I did that three times. After the second time the temperature dropped down, and after the third time it dropped and did not come up again.

I have had that experience on several occasions, and now when I have a confinement case and on about the fourth or fifth day the patient develops a high temperature and high blood count, if I can exclude malaria and other things I go into the uterus and gently clean it out thoroughly and thus prevent the infection from going deeper. It is true that puerperal sepsis goes deep into the uterine walls, but if we get it out first it will not go deep.

I do not believe in uterine douches. Two weeks ago I operated on a patient with general pelvic adhesions due to her having had uterine douches with bichloride solution about five years ago. The doctor inserted the uterine douche nozzle into the cervix and none of it came back. She had a strenuous time, of course, and it resulted in intraabdominal adhesions from the diaphragm to the bottom of the pelvis.

Dr. E. C. Parker (Gulfport): I want to differ a little on treatment. The less you do the better. My idea is to put the patient in the Fowler position, put an ice bag over the pelvic region, and let her alone. What do I accomplish by the Fowler position? Just what Doctor Hightower does when he dilates the cervix. The uterus drains all the time without disturbing the patient at all.

Dr. Albert C. Bryan (Meridian): My experience is practically the same as that of the essayist, with one exception. I have always gotten results with a big boggy uterus by keeping that uterus completely under the effect of ergot. One of the most important effects is that it closes the portals of absorption of the uterine tissue and keeps the poisons out of the body. I just want to bring out this point—that ergot is one of the greatest aids we have in keeping out poisons, and certainly in limiting absorption.

Dr. S. T. Wells (Alligator): I want to thoroughly disagree with the gentlemen in regard to the use of curettage. There is a tendency among the better informed doctors to condemn curettage. When I began practice I was afraid to touch a curette, but in country practice I found I had to use it. My practice has been largely among colored people, and of course these cases of puerperal sepsis we rarely see until they are two or three days old, sometimes a week. And my experience has been that unless there is good indication that the temperature is due to something else, the sooner you curette the better. Of course you must know that the debris is there causing the trouble, but if you go in with a dilator, if necessary, and a dull curette and irrigate the uterus with a solution of iodine you will get results. I rarely have to go back because the temperature drops and the patient is all right. I am surprised to hear good men condemn the use of the curette. Evidently they have never practiced

out in the styx. Of course, you must use some judgment with the curette and be sure you remove all the debris and keep the solution running until it comes back without debris. My experience is that the curette is not nearly so dangerous as some people would have us believe.

Dr. W. H. Scudder (Mayersville): I want to endorse what Doctor Hightower and Doctor Wells have said. I am one of the country doctors—one of the few left in the State. I want to say that if some of you city doctors lived in the country, as Doctor Wells, Dr. Hightower and I do, you would have to use a curette or dressing forceps, and you would have to use a dilator, if needed, and go in there and remove the rotten material obstructing the uterine canal. Something is in there blocking up the uterus, something which is decomposed and causing the fever and poison, and you must remove it. Why temporize by using an ice bag and placing the patient in the Fowler position? Simply a fad, a present-day fashion.

Dr. W. H. Hosey (Stringer): When you speak about the country doctor that gets me. I am led to make this remark—that it behooves us country fellows to watch for these conditions and prevent them, rather than to try to cure them. All these country men know what we have to go up against in these cases. Nine times out of ten instead of a nurse we have an old granny woman, and just as soon as we leave she puts a bandage on that patient and gives her a douche and gives her teas and things of that kind. I think most of our cases of puerperal sepsis in the country are caused by the granny woman giving the patient douches after we have left our instructions. When we go back the case is from three to five days old. Then the thing we do is to stop the procedure at once, but stay out of the uterus if we possibly can, and we generally can. We must use discretion about that. Then the old granny woman will not let the patient move out of the bed for six to nine days. The doctor must see after that himself, or the granny woman will keep the patient in bed without even changing the clothes for nine days. After we get these cases in our country practice we have to stop these douches and give the patient a chance to get well.

Dr. C. A. Sheeley (Gulfport): If we understand the condition that exists I think we will agree that drainage is the thing we want. Ten or twelve years ago I happened to be in the King County Hospital, New York. I was with a rather sensible doctor, or I took him to be. Up to that time I had used douches and irrigation and almost everything. He took me into some rather long obstetrical wards. They were the infected wards. There were probably twenty beds with women all sitting in the Fowler position. You all know that some women are too sick to put in that position. But these women were almost everyone sitting in the cobbler's position and I was much interested to know why. He said those were cases of puerperal sepsis. They came in with a temperature of 105 and up. They were at once put in this position; douches were stopped and everything but this position and strychnia. I think the Doctor was right when he said that in the modern hospital you can do many things besides putting them in the Fowler position and using ice bags. They need some help besides; they need the Murphy drip, the glucose drip; they need strychnia; they need intravenous infusions, they need every help that medical science can give.

But the essayist did not bring out the reason why he wants drainage and the reason why he cannot get drainage. It is this. The pelvis of

the woman is so constructed that the perineum is in this position (illustrates on blackboard), the uterus is in that position. The reason we put women in this position is because the cervix is dipping into a pool of pus, and until we get them in an upright position it will not run out. That principal holds good in a lot of other things. If you have a toothache, what happens? You go to a dentist and he says you have an infection in the root canal and he bores down and out comes a little gas, and the pain is gone. When you put a woman in the sitting position the uterus empties straight out. The gas pressure in the uterus is probably terrific, and as soon as she gets up it will empty out and the drainage is all you need, without douches. You can use ergot, strychnia, or anything that helps her—ice bag, sitting position, full diet and everything else that goes with it.

Dr. H. L. McKinnon (Hattiesburg). I have had very good results from staphylostrepto serum. Four or five years ago I had a staphylo-strepto infection myself and my attending physician gave me 2 cc of this serum every eight or ten hours, and the fact that I am living today is due to the effect of that serum. I have used it in a great many cases of sepsis. I stimulate the patient, keep her in a semi-sitting position and use this staphylo-strepto serum, and with plenty of elimination, and I have not lost a patient for several years. I wish you would try this serum. I know many of the doctors are prejudiced against serums, but if they were not potent I do not believe our biological laboratories would be in existence today.

Dr. D. T. Talmadge (Jackson): I wish to endorse what has been said about serum. I have used it in a good many cases with a temperature of 104, and the temperature dropped within 24 hours to 101. I believe it will pay anybody to use this serum.

Dr. E. H. Linfield (Gulfport): Along the line of treatment with serum I had the good fortune to visit Doctor Ochsner's clinic in the past week, and he told me he was using this new preparation, mercurochrome, intravenously in all cases of septicemia, whether they were severe or mild. He says he has good results. One of his assistants told me he himself is using a solution of urotone for the same purpose and is getting good results. He told me of a case of a young woman with acute tonsilitis and a very high temperature, to whom he gave three injections of urotone intravenously with immediate drop of temperature and all symptoms subsided.

Dr. L. B. Hudson (Hattiesburg): One point I want to stress and that is, that the only indication for introducing an instrument into the uterus of a patient with chills and fever following abortion or confinement, is the presence of hemorrhage. We have all seen cases subside on quinine. I recall in my interne service in Charity Hospital, in New Orleans, that Dr. Batchelor, then House Surgeon, was a great believer in quinine in these cases, claiming that even if it were not malaria, that quinine did good because it promoted leukocytosis. The point I want to make is that if a patient develops chill and fever, the only indication for going into the uterus is hemorrhage.

Dr. S. H. Hairston (closing): I have tried out all the methods mentioned, and am bound to believe that next year, when the doctor goes back to Ochsner's clinic, he will find Ochsner doing something else. I have tried mercurochrome and had bad results with it. I got a diarrhea and blood in the urine. Just at this time, when you have high fever and kidney activity lowered with

a cloudy swelling, you do not want to put anything in the blood stream to increase the kidney irritation. On the other hand, you have a patient with a high temperature, the body is putting forth every effort to throw off the infection. It is working overtime to manufacture antibodies, and by throwing a lot of protein poison into the circulation, you will not benefit the patient. This is especially true if you introduce serums and vaccines at this time. To my mind the intravenous drip (Matas) of glucose solution is the best remedy we have at our command.

The only excuse we have for going into the uterus is to stop hemorrhage. I do not even put them in the Fowler position. I think if Dr. Sheeley would go back to that same hospital he would find that they are not using this position so much now, because, in this position, the chronic congestion of the pelvic organs would do more harm than the drainage obtained would do good. By laying the patient flat, you equalize the blood stream and do not have a sagging at one place more than the other. I thank you for your discussion.

## HEMATURIA DUE TO UNILATERAL GLOMERULO-NEPHRITIS

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NEW ORLEANS

Hematuria due to glomerulo-nephritis is not uncommon, but severe hematuria due to unilateral glomerulo-nephritis, or to glomerulo-nephritis with arteriosclerosis of the glomeruli, is sufficiently uncommon to be of interest. This is especially true because the severity of the hemorrhage made nephrectomy advisable. In neither of these cases was the cause of hemorrhage determined until sections of the kidney tissue had been made. In one case, a preoperative diagnosis of hypernephroma was made, while, in the other, although no tubercle bacilli were found, it was thought that a tuberculous pyonephrosis was the probable explanation of the severe hemorrhage. In neither of these cases, has the pathological report been in sufficient detail to suggest the etiology of the glomerulo-nephritis, nor has it enabled, in one case at least, the exclusion of a focal embolic glomerulo-nephritis as the cause of the hematuria. Gross hematuria in focal embolic glomerulo-nephritis is even more rare than in the acute, subacute, or chronic glomerulo-nephritis and would not be less interesting if it were the underlying condition responsible for the hemorrhage.

### CASE 1.

J. P. L.—Age 51, widower, packer by occupation. Referred by Dr. J. W. A. Smith, August 7, 1922. The past history was negative for serious illness. There had been a neisserian infection 20

\*Read before the Louisiana State Medical Society, Opelousas, April 22, 1924.



Case 1.

years before. The infection lasted five or six months. There were no complication. Syphilis was denied. There was no history of operations except cauterization of a rodent ulcer of the nose some years back. The family history was negative for cancer, tuberculosis, or rheumatism.

Present complaint.—There has been profuse bloody urination for three days. There was no history of previous hematuria. There was no frequency, urgency, or tenesmus. The patient did not urinate at night and only two or three times during the day. The bowels were regular.

Examination revealed a thin, pale, and profoundly anemic male.

Head was negative except for a few bad teeth.

Neck negative.

Chest—Heart—roughened first sound with systolic murmur.

No enlargement.

Lungs—Increased breath sounds over left apex and both infraclavicular spaces; fine crepitant rales over scapular region on the left side.

Abdomen—no masses or organs palpable.

Wassermann—negative.

Urine—bloody, otherwise negative. No tubercle bacilli found.

Cystoscopy was attempted but the patient was so weak that the examination had to be discontinued before the source of hemorrhage could be ascertained. The patient was advised to go to the hospital for transfusion and observation, but declined. He was sent home, was put to bed and except for rest, refused all other treatment.

Seven months later he again consulted me. Although he had regained is strength, he had bled intermittently and for the last three days had been bleeding profusely. At this time, March 25, 1923, his red cell count was 3,000,000, his hemoglobin 70 per cent.

Blood pressure 100-80.

Cystoscopy—bladder negative. Blood was seen to come from the right ureter. No. 8 catheters were introduced to the pelvis, there was no obstruction on either side. The secretion from the right kidney looked like pure blood and was negative except for blood. No tubercule bacilli found.

Urine from the left kidney was negative except for two casts found after examining several fields.

The X-Ray for calculi was negative.

Pyelogram and ureterogram showed on the left side—Normal pelvis, regular and small (Cap. 5 c.c.) The kidney outline was normal and the position good.

The right kidney seemed to be slightly enlarged, the pelvis was slightly larger than the left, seemed to be slightly dilated. (Capacity 7 c.c.). The right ureter was raised, turned, and pushed towards the vertebral column and was somewhat dilated from the third lumbar vertebra up.

A probable diagnosis of tumor of the lower pole of the kidney was made. (Hypernephroma?)

A functional test of the kidneys, done three days later, showed the dye (Phenolsulphonephthalein) to appear from the left kidney in 4 1-2 minutes, the output for fifteen minutes was 15 per cent. From the right kidney no dye could be estimated because of the still severe hematuria with clothing and obstruction of the catheter.

On April 3, 1923, a nephrectomy was done under gas. An oblique incision was made and the kidney delivered. The kidney was not much enlarged, but the lower pole was rounded and almost twice the size of the upper pole, the ureter was raised and displaced by the lower pole. The pedicle was long. The pedicle was ligated with No. 3 chromic. The kidney and about five inches of ureter were removed. The muscles and fascia were approximated with No. 2 chromic. No. 15 silk was used for the skin. Time of operation 20 minutes. Pulse, on leaving table, 90. General condition excellent.

On sectioning, the kidney did not show any evidence of tumor or of tuberculosis and it was thought that a glomerulo-nephritis was responsible for the hematuria.

The convalescence was absolutely normal. The patient left the hospital on the 13th day, April 16, 1923.

In March, 1924, the patient reported for examination and was found to have had no more hemorrhage. His color was good, he had "gained fifteen pounds" and was rolling cotton bales on the river front for a living.

The pathological report by Dr. D'Aunoy follows:

"J. P. L., white, male, 51, Ward 11, Bed 4.

Kidney is about normal in size weighing 180 grams. Its capsule strips with slight difficulty; its cortex bears a ratio of about 1-4 to the medulla; petechial hemorrhages are to be seen throughout the cortex, and the pyramids are congested.

Final corrected microscopic diagnosis:—the glomeruli, here and there, show filling of Bowman's capsule with products of acute inflammation. The capillary whorl within the glomeruli are congested and in some rare instances there is intraglomerular hemorrhage. The tubules are distended and their lining epithelium swollen and granular. Tube casts are evident."

"Glomerulo-nephritis."

#### CASE 2.

Mrs. E. W.—Age 29, married.

Referred by Dr. Robert Bernhard for hematuria on August 15, 1923.

Past history:—menstruated at 16, periods 28 day type regular, flow three days.

Has had one child and one miscarriage.

Has had no serious illness and no operations except curettage.

Her mother died of tuberculosis ("Galloping consumption").

There was no history of cancer or rheumatism in the family.

Present history:—she complained of hematuria for three week. There was no history of vesical disturbance or previous hemorrhage.

Examination:—Pale, anemic female, who had evidently lost considerable weight.

Head, neck and chest are negative.

Abdomen—no organs or masses palpable.

Pelvis—uterus in good position. Tubes and ovaries negative for abnormalities.

Blood pressure 118-80.

Urine bloody. Microscopic examination showed blood, pus, *B. Coli*, and a few streptococci. Catheterized specimen for tubercle bacilli was negative. Cystoscopy the bladder was negative except for trabeculations. The ureteral orifices were normally situated and normal in appearance. Near the ostium of the right ureter there was a small yellowish white elevation, possibly a tubercle. From the right ureteral orifice bloody urine was observed. The ureters were readily catheterized to the pelvis. There was no obstruction to No. 6 catheters.

The urine from the right kidney was bloody and showed on microscopic examination of the sediment, besides blood, much pus, *B. Coli* and a few streptococci. Examination for tubercle bacilli was negative.

The urine from the left kidney was clear. The sediment showed a few leucocytes, a few red blood cells (probably traumatic) and an occasional colon bacillus. There were no casts. Examination for tubercle bacilli was negative.

The pelvis of the right kidney was washed with 1-2 per cent nitrate of silver.

During the next six days the hematuria persisted. The patient was again examined cystoscopically with the same results.

X-Rays for calculi were negative.

Pyelogram and ureterograms:

Right—pyonephrosis. Right ureter negative, except for displacement towards vertebral column, which it overlapped at the fourth and fifth lumbar vertebrae. The pelvic outline was not regular and the pelvis could not be made out.

Left pelvis narrow but normal. Calices normal except for upper calyx which was blunted slightly. The left ureter showed slight dilatation.

The following week a differential test (Phenolsulphonaphthalein) intravenously, gave the following results:

Left kidney dye appeared in 3 1-2 minutes and 10 per cent was excreted in 15 minutes. From the right kidney no dye could be detected because of the very bloody urine.

In spite of pelvic lavage on various occasions, from August 15th to August 31st, the profuse hemorrhage had continued, now for five weeks, and nephrectomy was advised and accepted.

Nephrectomy—gas anesthesia—Mayo incision.

The kidney was small and not adherent. It was dark red in color, the surface was irregular. The pedicle was short and after being doubly clamped, and the kidney removed, it was transfixed and ligated with No. 3 chromic. The muscles and fascia were approximated with No. 2 chromic. Silkworm was used for the skin. Time of operation forty-five minutes.

General condition excellent.

On sectioning the kidney there was apparent a marked fibrosis of the calices with marked dilatation of the minor calices, extending to within from



Case 2.

1-4 to 1-8 of an inch of the surface. The surface of the cavities were granular, there were some erosions of the pyramidal tips. There were occasional hemorrhagic extravasations. There was no evidence of tuberculosis.

The convalescence was uneventful, the patient leaving the hospital on the 13th day. Five months after, February 20, 1924, patient has had no hematuria.

Dr. Wm. Harris' report on this kidney was as follows:

"Mrs. W., Room 5 B., September 23, 1923. This kidney is somewhat smaller than normal. It is of a reddish-brown color and the surface is somewhat irregular. Upon sectioning, the pelvis is found dilated and some erosions of the pyramidal tips has occurred. Evidence of small hemorrhagic extravasations are seen microscopically, here and there, through the organ.

Microscopic:—sections through the eroded pyramidal tips show the edges to present scattered polymorphonuclear neutrophiles but very numerous lymphoid cells and a few plasma cells are massed beyond these and evidences of connective tissue hyperplasia. Throughout the organ, sections show many scattered masses of lymphoid cell accumulations, with a few plasma cells, many of which masses occur in the vicinity of the Malpighian bodies. The vessel walls, as a whole, are thickened and many vessels are markedly congested and in some areas hemorrhagic extravasation has occurred—a great many of the glomerular tufts present sclerosis with complete obliteration of the capillaries. The connective tissue element of the organ is greatly increased in some portions. The epithelium of the tubules presents granular degeneration and in many of the lumina of the tubules, cast formation is found.

Diagnosis—Pyonephrosis with marked chronic inflammation of the kidney and marked glomerular sclerosis."

To me, the picture is very suggestive of a glomerulo-nephritis of the endarteritic type.

In studying these cases, there are notwithstanding shortcomings, many points of interest that present themselves, clinical-

ly and pathologically. In the first case, the anatomical conformation of the lower pole of the kidney caused a displacement of the ureter and a dilatation of its upper segment. In the presence of a very severe hematuria on the same side, which was not otherwise accounted for, an erroneous diagnosis of neoplasm was made.

In glomerulo-nephritis, as in neoplastic disease of the kidney, bleeding has been observed to be intermittent. However, in glomerulo-nephritis, the bleeding is usually bilateral, less severe, and accompanied by evidences of nephritis. It is rare, judging by the available literature, to have severe gross unilateral hematuria due to glomerulo-nephritis.

In case 2, although a marked infection of the kidney was present, there was neither evidence of sepsis, probably due to good drainage from the kidney, nor even symptoms referable to the bladder which attracted the patient's attention to her condition, until the occurrence of severe bleeding. That pyonephrosis may occasionally be present, the patient, notwithstanding, enjoying good health, until some such symptom as hematuria, or the discovery of the condition during the course of a routine examination, has been the experience of many urologists.

In both cases reported there was a displacement of the ureter. This is not uncommonly found in neoplastic disease of the kidney. This displacement alone is of no significance, as we have observed it in many cases in which there were no symptoms suggestive of neoplasm and which at operation showed no neoplasm.

In neither case were there symptoms of nephritis and under the circumstances we would not expect any. The unaffected glomeruli and their corresponding tubules, as well as the glomeruli and their tubules in the opposite kidney being sufficient for proper elimination. This is evidenced, in part at least, by the functional test of the unaffected kidney.

That the anemia in these cases was due to loss of blood and not to a hydremia is borne out by the appearance and the general condition of the patients several months after operation, and, in one of the cases, during the interval between hemorrhages.

The source of hemorrhage in Case 1 was apparently intra-glomerular, while in Case 2, the hemorrhage was apparently due to

congestion and rupture of intertubular capillaries.

### Conclusions

While no conclusions can be drawn from the study of two cases, and still less from the insufficient study of the kidney tissue which was available, it would be interesting to know, whether the infection of the kidney in Case 2 had a direct bearing on the nephritis, or whether the vascular changes in the glomeruli had their origin in an ischemia due to pressure by the inflammatory products without the Malpighian bodies.

The fact that a gross unilateral hemorrhage can be due to glomerulo-nephritis would suggest that in at least some of our undiagnosed renal hematurias the cause is to be found in a localized glomerulo-nephritis, so limited in its extent, as to defy detection by blood chemistry, renal functional tests, urinalysis, or clinical evidence of nephritis.

Although nephrectomy is indicated for severe hematuria, when other means have failed, it should be remembered that in glomerulo-nephritis hemorrhages are usually intermittent and that after ceasing they may not recur as gross hemorrhages for long periods, if at all. On the other hand, even in the face of a persistent, severe unilateral hematuria, if there is evidence of nephritis indicated by urinary changes in the opposite kidney, increase in blood pressure, adema, changes in the blood and evidence of uremia, nephrectomy is contra-indicated.

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### TUBERCULOSIS IN INFANCY AND EARLY CHILDHOOD.\*

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The more recent study and research in tuberculosis would more and more justify the opinion or belief that it is a disease of

\*Read before the Mississippi State Medical Association, Jackson, May 13, 1924.

early life. Some authorities claim that from 60 to 85 per cent of all tuberculosis is contracted before the sixteenth year. Others claim the high percentage of occurrence, but that the infection takes place before the eleventh year. The fact is, the younger the child, the greater the susceptibility to tuberculosis, and exposure in an infant under twelve months of age, for any length of time is almost certain to be followed by the development of some form of tuberculosis.

Examination of the anterior and posterior cervical glands will show surprisingly high percentage of enlarged glands, and while there are many conditions which will cause these glands to become enlarged, yet the persistence of chronically enlarged cervical glands strongly indicates the presence of tubercular infection. Hamburger (1) states that 95 per cent of these chronically enlarged glands are tubercular. Other authorities state that from 60 to 85 per cent are infected.

Wahl and Gerstenberger (2) in a report on tuberculin tests made on the exposed, suspicious, or actively tuberculous individuals in the babies dispensary of the Cleveland Hospital from 1907 to 1921, show 54 per cent males, and 61 per cent females, giving a positive von-pirquet reaction. Also that 44 per cent of positive cases gave a definite history of contact. Further, that cases giving a history of two or more exposures show a higher percentage of infection, than those with one exposure.

Gordon and Brown (3) quoting Park and Krumveide point out that the bovine type of bacillus was the infecting organism in 11 per cent of all their cases, and that 90 per cent of these cases were under sixteen years of age.

The Journal of the A. M. A. (4) reports 500 cases from the ages of birth to eight years, from three hundred and ten tuberculous homes, examined by the von-pirquet test, the result of the examination shows a high percentage of positive reactions, over 60 per cent, and the point was particularly stressed that in order to control the disease the child must be isolated from the disease, or the source of infection must be removed from the child.

Taylor and Moorman (5) analyzing 223 cases under sixteen years of age with reference to tuberculosis find that 119 gave a history of direct contact. Of these, 53.8 per cent showed a heavy infection, 36.2 per cent showed a moderate infection, and 10.8 per cent showed a light infection. In

other words of the total 119 cases who gave a history of contact, 100 per cent showed some degree of tubercular infection.

I wish here to report the number of tuberculous cases coming through my office during the greater part of the past two years. Of these cases, 106 under five years of age presented sufficient symptoms such as enlarged cervical glands, secondary anemia, increased lymphocytosis, under weight, or gave a history of exposure sufficient to justify a von-pirquet test, as well as other special tests for tuberculosis. In the first group, 18 or 50 per cent of those examined gave a positive tuberculin reaction. This represents a total of 6.6 per cent of those coming through the office during that period, but does not include those positive cases over five years of age. In the second group of 70, 30, or 42.8 per cent gave a positive reaction. These findings are lower than the reports of a majority of writers, although Morse (6) states that in 10,000 examinations he only found 100 positive, which is 1 per cent of cases examined. That there is some fault in his method is probable by the preponderance of evidence to the contrary.

Relative to the source of infection, it is admitted that 10 to 25 per cent of infections are of the bovine type, and we are justified in the conclusion that this infection takes place through the milk supply. This percentage ought to materially decrease under the rigid enforcement of the law preventing the sale of milk from tuberculous cows, and educating the mothers to the danger of using such milk.

In the human type in children, on account of the involvement being largely glandular, the infection takes place through the lymphoid tissue of the pharynx, and upper respiratory tract, and is carried to the cervical and tracheo-bronchial glands.

Tinker (7) states that "In childhood we seldom find a true disease of the lung tissue, tuberculosis for the most part, taking the form of a glandular disease." He also points out that nasopharyngeal disease producing a nasal obstruction is a far more probable source of infection of lung tissue, than that taking place from the lung tissue proper to the bronchial glands. Infants under 1 year of age are very susceptible to tubercular meningitis. This infection takes place either through the lymphatics, following the olfactory nerve sheaths, or through the general circulation, being taken up through the digestive tract.

W. V. Mullin (8) in writing on "Tuber-

ercles in the tonsils," states that in three cases showing tubercular, cervical adenitis, two presented tuberculous tonsils or adenoids. Also in quoting case reports from the Hopkins Hospital, he states that in those cases showing definite tubercular infection of the cervical glands, one-half, or 50 per cent of tonsils were found to be tuberculous. Further, an analysis of the tuberculous tonsils showed the cervical glands to be involved in fifty per cent of all cases. In quoting Mullin further, in 400 consecutive tonsillectomies of his own, 4.25 per cent showed tuberculosis of the tonsil and adenoids in various combinations. This statement is of particular interest at the present time in view of the variance of opinion as to the actual existence of tuberculosis in the tonsil. By way of explanation however, the diagnosis was made, not by isolating the tubercle bacillus, but by the presence of large mononuclear cells, accompanied by giant cells found in the typical tubercle.

Unless children are examined for tuberculosis with the view of eliminating this disease, the diagnosis in many cases will be over looked. Indeed, I am surprised at the high incidence rate in children who show no active signs of tubercular infection, further than a secondary anemia, certain blood changes, under-weight, and other signs of backward physical development. An important thing to consider in the diagnosis is, history of exposure at any time since birth, either through occupancy of a house previously occupied by tuberculous people, or contact with infected persons.

Since a large per cent of enlarged cervical glands are considered tubercular, the presence of such enlarged glands are an important thing to consider in the diagnosis. The blood examination is helpful only in a confirmatory way. If the disease is of one or more years duration, the complement fixation test is very helpful. The blood picture is that of any secondary anemia, that is low hemoglobin, relative lymphocytosis, increase in eosinophiles, and usually a change in the red blood cells. The tuberculin test is of the greatest value in children under five years of age, and of partial value up to ten years.

Duzar (9) describes the colloidal flocculation test of the blood according to the Daranyi method which is practically pathognomonic of tuberculosis, and is considered one of the most dependable tests for tuberculosis in early life. This test is easily made by any well equipped labora-

tory, and is as follows: The Daranyi test is made with 0.2 c.c of the serum to be examined, added to 1.1 c.c. of 96 per cent alcohol diluted with 2 per cent sodium chloride solution (4.1 c.c. of the saline solution to each 1. c.c of the alcohol). The mixture is well shaken and heated in the water bath at 60 C. for twenty minutes. The tubes are then kept slanting at room temperature, against a dark background, and are inspected without disturbing. When flocculation occurs at the half of first hour, this is a four plus reaction. The negative reaction is recorded at the twenty-fourth hour if no flocculation has occurred. It is important to titrate the alcohol dilution each time with control serums.

Physical signs are of much importance, and used in close conjunction with the X-ray, often confirm the diagnosis. D'Espine's sign is of value, and indicate enlarged bronchial glands. The course of the disease is essentially chronic in a high percentage of cases. During the past year I saw only three cases of frank pulmonary involvement, and these were not reported in my cases as they were over five years of age.

Glandular tuberculosis tends to symptomatic recovery, and more than likely develops a comparative immunity against the disease in later life. In the matter of treatment, diet, sunshine, daily rest periods, cod liver oil, calcium lactate, and the removal of any focal infection are of the prime importance. More recently the introduction of Ultra Violet Ray Therapy, or Quartz Lamp, gives promise of gratifying results. I am able to report ten cases treated with the Ultra Violet Ray during the past few months, in which without exception, the improvement was marked. This was shown principally in the increase of weight, rise of hemoglobin, and general systemic improvement. One point in particular I would mention is the rapid rise in hemoglobin. I have seen it repeatedly go up from twelve to fifteen points in three weeks time.

### *Conclusions*

First: Tuberculosis is essentially a disease of infancy and early childhood, and a very large percentage, probably 90 per cent of all infection takes place by the fifth year.

Second: The younger the individual, the higher the susceptibility to tuberculosis.

Third: Any child who is 20 or 30 per



cent underweight, with a blood picture of secondary anemia, and a history of exposure to tuberculosis, should be thoroughly examined for tuberculosis.

Fourth: The higher rate of tuberculosis in infancy and early childhood, should be made a matter of special study by the general practitioner, as it is a disease in which prevention and early recognition will go far toward stamping out the disease.

Fifth: Contrary to the opinion of the early writers on this subject, a high percentage of these cases make a symptomatic recovery, and as far as we know possess an immunity throughout life, unless this resistance is undermined by some serious inter-current infection.

Sixth: Removal of focal infection, diet, regular habits, sleep, sunshine, are the known factors in treatment.

Seventh: The Ultra Violet Ray Lamp is the greatest value in starting the patient toward recovery in those cases, who by reason of previous illness have a low resistance.

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### DISCUSSION.

Dr. Riley W. Burnett (D'Lo): The point I wish especially to mention is the prevention of tuberculosis in children. I believe if our health officials in the country and city would go into the schools and make a survey and find those children who are at least 3 per cent underweight, and put them into a class and bring their weight up to normal they would do a great deal towards preventing tuberculosis in Mississippi. The children of this generation are the ones who will give their infection to the next.

Dr. Geo. E. Adkins (Jackson): The portal of entry of tuberculosis and its time of entry to the human body is one of the things that interest the medical profession very vitally.

Dr. Womack well stated that tuberculosis of the brain and spinal cord must enter through the nasopharynx, or to make it a little more specific, it must enter through the cribiform plate of the

ethmoid bone, traveling along the course of the olfactory nerves. Those cases of tubercular adenitis very likely get their infection through the lymph channels leading from the naso-pharynx, and it is from this source of infection that we have the characteristic post-cervical involvement due to the fact that the lymphatics from the nasopharynx drain into the post-cervical glands (those back of the sterno-mastoid muscle).

The theory of tuberculosis entering any part of the human system through the tonsil, to my mind has been well exploded. In a record of eighteen hundred cases, one thousand of which were worked by one man, and eight hundred by another, both independently and in separate laboratories, a tubercular bacillus was found only one time.

I do not know of any cases of tuberculosis involving the glands of the neck anterior to the sternomastoid.

That tuberculosis can reach the lung, and does reach it through the respiratory tract, none of us can question.

As to the time when the human being becomes infected with tuberculosis I must confess that I am a convert to the belief that it is practically all (if not all indeed) contracted early in life, and that some of the cases are not manifested until later in life.

Dr. C. C. Buchanan (Hattiesburg): Having examined a number of children in public health work in the State of Mississippi, and quite a few thousands recently in Forest County, and having had a cattle test in Forest County, I am glad to report to your convention that in the cattle test we were only able to find six cows in Forest County that responded to the test for tuberculosis.

We have been talking about bovine tuberculosis. That is rather an exploded idea down there. I was very much interested in listening to the explanation of how these children contract tuberculosis. I have noticed, as Doctor Adkins says, that the lymphatics taking up these poisons of course are posterior to the sternomastoid muscle, and not from the tonsils and throat.

We are preparing some statistics in Forest County that we hope will be ready some time for the Mississippi State Medical Society. Last year we picked up 238 children that had tonsils and adenoids removed; 82 children had defects in vision corrected, and over 1,200 children had teeth filled. In the past two weeks we examined 273 children in Hattiesburg, and only 9 needed a dentist. I simply mention this because it shows you that as public health workers we are trying, with your co-operation, to accomplish something, and we have that in Hattiesburg. I want to ask you to have patience with the public health workers. We make many mistakes, but our hearts are in the work, and we know of no greater or grander work in the world except that of spreading the Gospel. Let us get together in this work in this grand old Magnolia State.

Dr. Richard C. Bunting (Memphis, Tenn.): I would like to call your attention to a condition

sometimes seen in tuberculous patients in which the outcome is practically hopeless. I have reference to tuberculous meningitis. We do see it, not often, fortunately, because the end result means the undertaker. When we see these cases, often the initial lesion is not plain and we perplex ourselves as to what we have confronting us. If there is anything that is significant in tuberculous meningitis, it is the multiplicity of cranial symptoms, ranging anywhere from cranial nerve palsies to involvement of the pyramidal tracts. These patients are clinically sick; they are losing weight fast; they may show hemiplegia, they usually show cranial nerve palsy or palsies, and sometimes we are in doubt as to the diagnosis; and the diagnosis is important because we must know what to tell the family. Our textbooks tell us that drainage of the subarachnoid sac, centrifuging the fluid, and making a smear, will often show the tubercle bacillus. I have seen about seventeen cases of tubercular meningitis, and have had the best co-operation of the laboratories in searching for the tubercle bacillus in the fluids, yet we have not been so fortunate to find the bacillus in any case. The spinal fluid is usually of the usual water color. However, it may be cloudy, slightly red, or even of a yellowish tinge. With the cranial nerve palsies, and a spinal fluid showing a high cell count, usually lymphocytes, though not necessarily so, because we sometimes find the polynuclears, we are able to give the diagnosis of tuberculous meningitis. Perhaps I regard the high cell count the most important of the many clinical signs.

Dr. N. C. Womack (closing): Tuberculosis is now admitted to be a disease of infancy in early life, and it is a big problem. Tuberculosis is an infectious disease in the same way that measles is, and if an infant is exposed even slightly, it stands a good chance to get the disease.

I appreciate Dr. Adkins remarks because he is well grounded in anatomy, and I will therefore not argue the point with him, but I do think that many more tubercular infections take place through the tonsils than most of us at present believe.

I was glad to hear Dr. Bunting's discussion as to tuberculous meningitis. I wish to report a case in an infant twelve months of age that gave no history of exposure except that it was with an aunt two weeks after the mother came from the hospital. Three months later this aunt developed tuberculosis, and when the baby was six months old it developed tubercular meningitis. Its only known exposure was the two weeks it was cared for by this aunt immediately after coming home from the hospital. The baby had all the classical symptoms of tubercular meningitis, the organism being demonstrated in the spinal fluid. The spinal fluid was daily taken off and pure oxygen put in under rather high pressure until there was bulging of the anterior fontanelle. Prior to each operation the baby would lie in a stupor, eyes crossed, would not nurse, etc. Immediately after the drain and insertion of oxygen the baby would apparently be well. Would smile, nurse, notice the surroundings, and for a while would appear as a normal baby. This went on for thirty-three days. The baby died suddenly from respiratory paralysis.

The point I wish to especially emphasize in the paper is that tuberculosis is essentially a disease of infancy and early life. That the younger the individual, the more susceptible they are to the disease, and that prevention is the principal point to be considered in its treatment.

## SPLENECTOMY IN PURPURA\*

I. I. LEMANN, M. D.

and

ISIDORE COHN, M. D.

NEW ORLEANS.

The brilliant results of splenectomy for the relief and control of hemorrhage in purpura hemorrhagica during the past few years have stimulated a fresh investigation of this puzzling malady and seem to hold forth substantial hope for its cure in properly selected cases. It has been our privilege to witness such a prompt control of the phenomena of the disease in an alarming purpura and to follow the continued and progressive improvement of our patient during the year that has elapsed since the splenectomy.

Much confusion formerly existed in the field of the hemorrhagic diseases. Some of this confusion has been cleared up by classifications based variously upon etiological, pathogenetic, and clinical considerations, and we can now realize that widely differing diseases signalized by the tendency to bleeding were easily taken for one another. Thanks to the studies of the process of coagulation we are in a position to differentiate between a continued hemorrhage following traumatism no matter how slight and dependent upon the pathological disturbances of these processes of coagulation and a spontaneous hemorrhage from mucous membrane or into the skin or serous membranes or internal organs without demonstrable disturbances of blood coagulation. Clinical as well as laboratory observations have served to set off diseases of the type of scurvy as definite entities produced by deprivation of essential vitamins. Another interesting, apparently distinct group, but still mysterious from the point of view of etiology and pathogenesis, embraces hemorrhagic states associated with angioneurotic edema and joint phenomena. Spontaneous hemorrhage into the skin and from mucous membranes occur frequently in the course of infectious diseases (measles, small pox) septicemias (ulcerative endocarditis) focal infections, (tonsillitis); this has been designated symptomatic purpura. Two other groups of symptomatic purpura are to be noted: the first observed in cachetic and asthenic states and disturbances of metabolism (old age, arterio-sclerosis, nephritis, diabetes),

\*Read before Louisiana State Medical Society, Opelousas, April 22, 1924.

the second in relation with blood dyscrasias, leukemia, pernicious anemia, Banti's disease, aleukia hemorrhagica, aplastic anemia, (Benzol poisoning). The residue of hemorrhagic conditions may be designated idiopathic, or at least cryptogenetic, for this group is not associated with any other symptoms or disease and is without known cause. Some authors have divided the idiopathic purpuras still further into purpura simplex and purpura hemorrhagica; the former being manifest only by the spontaneous hemorrhages into the skin; the latter having as its chief phenomenon bleedings from mucous membranes in addition to the skin lesions. We shall return later to remark upon this point of differentiation. Your attention is now directed particularly to purpura hemorrhagica idiopathica, the disease which Werlhoff described as early as 1775. In 1887 Denys<sup>8</sup> observed in such a case an entire absence of blood platelets which had previously been described by Hayem<sup>7</sup> and Bizzozero. Practically no significance was attributed to this observation until recent years, but within the last two decades abundant proof of marked reduction in the platelets in purpura hemorrhagica has been offered by many observers. The platelets in normal blood are from 200,000 to 300,000, per cubic millimeter, and it has been shown that hemorrhages occur when their number fall below 40,000. Furthermore it has been possible experimentally to reduce the number of the platelets without affecting the other elements of the blood by the injection of anti-platelet serum and thus artificially to reproduce the skin lesion of purpura. This anti-platelet serum was obtained by the repeated injection into animals of alien blood platelets<sup>6</sup>. It is worthy of note, also, that in the cases of blood dyscrasias where purpura has occurred, there has been a notable reduction of the platelets. This reduction of the platelets, then, has come to be regarded as the characteristic which distinguishes certain of the hemorrhagic diseases. It has been shown that these platelets or thrombocytes contain thromboplastic substance which is concerned in the normal process of coagulation, but it is evident that purpura is not dependent upon the disturbance of this particular function, for in patients with purpura there is no delay of coagulation and in these patients the hemorrhages occur spontaneously and without trauma or open lesion, into the tissues and from the mucous membranes. In contrast with the normal coagulation time of the blood of

these patients is the prolonged bleeding time and the non-retractile clot. The blood of the hemophilic patient on the other hand has a prolonged time, but a normally retractile clot, once it is formed. Just how the platelets function *in vivo*, to prevent the diapedesis of the other formed elements, and how the reduction of platelets permits such a diapedesis is still unexplained. It has been suggested that the platelets adhere to the walls of capillaries and form plugs, as it were, to close the stomata through which in their absence the corpuscles pass out into the tissues. Incidentally it should be pointed out that an explanation of purpura without thrombocytopenia (blood-platelet poverty) has been that the capillary walls have been affected and it has been proposed to divide purpura from a pathogenetic point of view into: (a) hematogenetic, (b) vaso-genetic. Whatever may be the manner in which platelets act *in vivo*, their number represents, it must be agreed index to the hemorrhagic process in certain purpuras, and we must inquire into their origin and into the possible ways in which their number may be affected, Wright's<sup>10</sup> explanation of the origin of platelets from the megakaryocytes of the bone marrow is generally accepted, though Foa<sup>9</sup> remarks that it is not easily confirmed. Blood platelet poverty may be due to diminished production or increased destruction of those normally formed. The former conception is that of Frank<sup>1</sup> and Glanzmann<sup>2</sup> and has been designated by the former "essential thrombopenia" or "thrombocytopenia." It finds an analogy and some confirmation in the myelotoxic process of blood dyscrasias, where the blood platelet and their progeners, the megakaryocytes, suffer as well as the red and white corpuscles (notably in benzol poisoning, Banti's disease, aplastic anemia). The increased destruction of normally formed platelets (thrombocytolysis) is the conception of Kaznelson<sup>3</sup>. We have, then, spread before us the picture of the hemorrhagic purpuras from the pathogenetic view point. We revert now to the differentiation between purpura simplex and purpura hemorrhagica, to remark that it is difficult any longer to accede to this division, for there are cases of purpura simplex with thrombocytopenia, of which ours is one although all true cases of purpura hemorrhagica show the low platelet count. Furthermore, there is no good reason to differentiate between the hemorrhage on the basis of their site, whether they proceed into the skin, from mucous membranes, or

elsewhere. Clinically both purpura hemorrhagica and purpura simplex exhibit corresponding types; acute, chronic, and recurrent. There are many cases which last through years and the patients remain in good health otherwise. On the other hand, other patients suffer such frequent and severe hemorrhages that they finally become so weak and anemic that the disease not only makes them chronic invalids, but even threatens life. Such patients have been transfused with blood from proper donors and have, in some instances, been benefited, but usually only in a fleeting fashion. The new platelets furnished by the donor's blood have a very limited life and the platelet count soon falls and the former symptoms return. In 1916 Kaznelson<sup>3</sup> suggested splenectomy both because he had noted a splenic enlargement in purpura hemorrhagica, and because of theoretical considerations as to thrombocytes after radiation of the spleen. He has reported two splenectomies with brilliant results and others have since put on record, about a dozen cases with almost uniformly satisfactory, sometimes spectacular results. The universal report is that the platelet count from a few hundred or a few thousand and before operation, rises very markedly by many thousands within an hour after the operation, and usually reaches the normal within a few days. Subsequently, however, many cases have shown a fall in the count sometimes down to and below the critical point of 40,000, but without return of the hemorrhages. Not only Kaznelson, but also Brill and Rosenthal<sup>4</sup> and Giffen<sup>5</sup> have observed upon the operating table immediately upon the clamping of the splenic pedicle a cessation of the bleeding. Brill, for example, described graphically how the oozing wound which gave the operator grave concern became dry at once when the splenic pedicle has been clamped.

There remains much, therefore, to be explained.

I. How do the platelets function in vivo? This must be apart from their thromboplastic function.

II. What is the function of the spleen with regard to platelets? The assumption of a myeloxic or even marrow inhibiting action will not account for the immediate cessation of hemorrhage after the clamping of the splenic pedicle. The theory of thrombocytolysis by the diseased spleen is not much more satisfactory in this regard, for the action is apparently too

prompt. The observation of the clinicians would seem to have all the validity of a laboratory experiment.

III. Are the thrombocytes (platelets) concerned directly in the process or is their number merely an index of other factors?

IV. Why may the platelet count after initial rise following splenectomy fall to critical limits without further hemorrhages occurring?

Whatever may be our views on these points, it cannot be gainsaid that splenectomy has now been shown repeatedly to be a life saving procedure. It is for this reason that we have desired to bring the matter to your attention and to relate details of the satisfactory progress of our patient.

D.— F.—

Age 5 1-2 years.

No history of family bleeding.

No infectious diseases except Grippe. Congenital club foot. Operated at 4 months of age, (Lorenz method) by Dr. Fraunethal, of New York; at 13 months by Dr. Jacobs of Chicago. Was always a difficult child to feed; nervous. Tonsillectomy by Dr. Haspel in January, 1923. Has improved greatly since.

#### *Present Illness.*

First seen about the 25th of February, 1923, when a few brownish marks and purplish marks were noticed on the lower arm and below the elbow wrist and legs, varying in size from a pea to a quarter.

At first it was thought that they were bruises, though the child insisted that he had not fallen and that he had not hurt himself. Some new spots were noticed before the child dressed, there having been no opportunity for injury.

He was first brought under observation because of a rather large ecchymotic area in the sacral region. Within a few hours this area increased in size. He was kept under observation a few days during which time he was given calcium lactate.

On March 8, 1923, several large purplish areas developed, one over the left iliac region and one large spot in the perineum, and there was a generalized spotting of the child's body. The new spots presented a light blue color in the center, older spots had a greenish hue, and as time went on there was a brownish pigmentation of the periphery.

Some of these areas had a doughy feeling.

Large areas were noted as follows:

Left forearm posterior surface—4 cm.

Right forearm anterior surface—3-4 cm.

Right hip external surface—6 cm.

Sacral region—4 cm. old.

Left hip external surface—6 cm. (dark blue).

First transfusion. March 9, 1923.

Blood transfusion. Donor, father; type 4. Child, type 2.

250 ccs. citrated with 20 ccs. of 2 per cent Sodium Citrate. He was allowed to go home the next day.

The spots began to fade rapidly and no new spots were noted until about the 30th of March when the father noticed several small brownish spots.

On April 3rd a number of small purplish spots were noticed. On April 4th a second transfusion was done. 200 c.c. of citrated blood was given.

April 14th. New spots appeared. A third transfusion was given of 250 c.c. of citrated blood.

The patient was kept under observation and given gelatine and calcium lactate, but in spite of this on May 4th, several hemorrhagic areas were noted. He then returned to the hospital for transfusion of 300 c.c. citrated blood. *On the 3rd of June, the patient was admitted to the hospital for splenectomy.*

Physical Examination, June 3rd, 1923.

Fairly well nourished, though slightly anemic child.

There are a few pale brownish spots noted over the extremities. Near the left hip there is a large faded, pigmented area of the original large lesion which was noted at the first transfusion.

Head and Neck.

	1 <sup>2</sup> 3	4	5	6-13-23	7-2-23	7-25-23	10-30-23	1-17-24
Hemoglobin . . . . .	3-8-23	41-5-23	6-3-23					
Red Blood Corpuscles . . . . .	3,760,000	4,820,000	3,780,000	4,950,000	4,730,000	5,060,000	4,650,000	4,740,000
White Blood Corpuscles . . . . .	7,500	6,000	6,500	17,500	8,700	9,500		10,000
Polymorphonuclears . . . . .	62	46	57					61 1-3
Small Mononuclears . . . . .	31	48	29					30 2-5
Large Mononuclears . . . . .	5	5	13					7
Eosinophiles . . . . .	2		1					1
Platelets . . . . .	only	occasional						
Coagulation Time* . . . . .	3 ½ in.		4 min.		400,000	145,000	232,000	140,000
Bleeding Time . . . . .			5					
<sup>1</sup> First transfusion . . . . .	4-3-23							
<sup>2</sup> Second transfusion . . . . .	4-3-23							
<sup>3</sup> Third transfusion . . . . .	4-11-23							
<sup>4</sup> Fourth transfusion . . . . .	4-4-23							
<sup>5</sup> Splenectomy . . . . .	6-4-23							
*Coagulation time . . . . .	1-3-24 (Da)							

ture and pulse had become normal and remained 30 to 40 for more than a week.

There has been no recurrence of the purpura. The child has grown and developed. For some weeks following the operation he was encouraged to stay in the sun light with as little clothes as possible in order to stimulate the bone marrow. There is a great contrast between the condition of the boy before the splenectomy and his present condition. The operation was done because of the alarming extent of the purpura and of the progress of the anemia. We are not suggesting similiar operations in cases other than those with thrombocytopenia.

Below is given in tabular form the blood findings before and since the operation:

Pupils equal, react to light and accomodation. Teeth good. Tonsils fossae empty.

Thorax. Well formed, symmetrical. Lungs normal. Heart normal. Apex impulse 4th inter space within the nipple line.

Abdomen. Soft flaccid, no tenderness. *Spleen not palpable.* Liver not palpable.

X-Ray examination of chest June 4th. No evidence of an enlargement of the thymus.

Splenectomy was performed by Dr. Isidore Cohn, June 4th, 1923. There was no technical difficulty. The spleen was slightly larger than normal, and there was a small accessory spleen on the posterior aspect near the hilum. (Details of the operation have been reported in another place. Surgery, Gynecology, and Obstetrics).

Following the operation, within an hour, there was a febrile reaction up to 103 degrees, pulse to 160 and respiration to 45. There were numerous sonorous and sibilant rales throughout both lungs with great bronchial fremitus corresponding to these. The next day there was dullness at the base of the left lung. On the third day this dullness had disappeared but there was very slight dullness at right base. The temperature continued between 102-103 degrees for three days, then fell by lysis; after the seventh day it was normal. The respirations continued rapid even to 50 to 55 while the temperature was dropping and after the pulse had dropped to the level of 100-120. Skiagraph of the chest made June 11, showed evidence of pneumonia of the right side extending from region of scapula to the base.

We wish to stress the fact that the hyperrpnea continued even after the tempera-

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DISCUSSION

Dr. A. A. Herold, (Shreveport): This is a very interesting presentation of this subject, not only from the good results obtained, but also from the detail with which he has gone into it. Just a few days ago a physician of Shreveport told me he had done a splenectomy in purpura hemorrhagica with immediate relief and with apparently splendid results. As soon as the spleen was removed the symptoms began to improve.

Doctor Lemann went into details as to the blood

in patients with purpura hemorrhagica, and in this connection I wish to mention two cases which I had about two years ago, one a patient referred to me by Doctor Sanderson, who had been treated by different means in a medical way, and the doctor was puzzled what to do. I looked up the authorities and found that a Frenchman advocated the subcutaneous use of gelatine. I of course concluded they aimed to increase the coagulability of the blood, although according to Doctor Lemann, that is not required. This patient after three injections was apparently all right and remained so for about a year. I heard afterwards from the family physician that there had been some recurrence, and he asked me how to use the gelatine.

Shortly after that I had another case, also referred by Doctor Sanderson, and in view of my apparent success with the other case I gave this case subcutaneous injections of gelatine, and after two years this patient has remained well.

Dr. F. M. Johns, (New Orleans): I am glad this paper has come up for the benefit of the ear, nose and throat people. They are always sending people to the laboratory for test of the coagulation time, and as far as I can see the coagulation time has very little to do with tonsillectomy. The "bleeding time" determination is of the utmost importance.

The stoppage of hemorrhage consists of two things; one is the contraction of the cut ends of the vessels and then these become covered with platelets, forming a thrombus. Coagulation is a condition that occurs in "still" blood outside of the blood vessels.

The Mayos have reported some success in treating the spleen in purpura hemorrhagica with the X-Ray, and are looking forward to some non-surgical help in at least controlling these cases.

Dr. I. I. Lemann: (Closing) There are two points I brought out that I would like to emphasize still further. One of them is the brilliancy of the operation. I was present last spring at Atlantic City when Doctor Brill described the operation in two cases, two children, one a boy and the other a girl, who had been bleeding so profusely from their mucous membranes that they had become tremendously anemic and were in collapse; their lives were threatened. At the time of the operation the wound bled as I have already described. Naturally the surgeon was tremendously alarmed, but when the clamp was put on the pedicle of the spleen the wound became dry at once and was closed without difficulty. As I said, these were not isolated exceptions. The case of Giffin at the Mayo Clinic presented the same picture, so one must feel that the presence of the clamp upon the spleen pedicle does at once produce a cessation of the hemorrhage.

The other thing I wish to emphasize is that coagulation outside of the body is quite different from prevention of bleeding within the body into the tissues, or even from the mucous membranes, and that coagulation is a different process from continued bleeding. Continued bleeding may go on with normal coagulation, and you may have even abnormal coagulation and a relatively short bleeding time.

The final thing to which I wish to call your attention is that these cases of purpura are differentiated further from bleeders by the characteristic family history of the bleeding. The bleeders

are usually bleeders by heredity in a very characteristic fashion. The heredity descends through the female, but the females are not affected; it is always the males who are bleeders and they get their bleeding tendencies from their mother.

## TREATMENT OF PROSTATIC HYPERTROPHY\*

P. G. GAMBLE, M. D.

GREENVILLE, MISS.

The results of surgery of the prostate in the early days were often very unsatisfactory in patients who recovered from the operation, in addition to the high mortality associated with it. With the valuable work done on the preliminary preparation of the patient for the operation, the development of accurate technique, and the proper after care have greatly lowered the mortality rate, and established a very satisfactory end result.

The preliminary preparation of the patient consists of relieving the patient of the residual urine, preventing absorption, and relieving the kidneys, at the same time treating the cystitis if it be present. A large percentage of the deaths connected with these operations are directly attributable to the kidney diseases resulting in uremia, and a large proportion of the deaths attributed to other diseases, the kidneys are also affected.

Whether it is the presence of the residual urine in the bladder, the infection or whether it is the backward pressure of the urine upon the kidneys which produces a deleterious effect is uncertain, but it is a fact that a reaction may be produced by keeping the bladder empty when it has been accustomed to a few ounces of residual urine, or by instrumentation. In order to overcome the obstruction a catheter is fastened in the bladder through the urethra so that the bladder may be drained properly or a supra pubic cystotomy is performed, or by frequent catheterization. Care should be taken not to empty the bladder too suddenly.

An indwelling catheter is borne well by only a few because of the congestion of the prostate the catheter usually becomes so irritating that three or five days is about the limit of endurance. Frequent catheterization needs the attention of a physician or a trained nurse. Greatest care must be given to gentleness as well as strict asepsis. After a few days a congested urethra rebels, and bleeding follows each catheterization.

\*Read before Mississippi State Medical Association, Jackson, May 13-14, 1924.

Epididymitis is also a frequent and painful result of the catheterization, and the use of the indwelling catheter. Why not do a cystotomy at the beginning of the treatment? Under a local anesthesia it can be performed in a very short time with practically no more pain to the patient than he frequently experiences with the indwelling catheter or the frequent catheterization. Under local anesthesia the operator can take plenty of time in selecting the highest point of the bladder opening. With a cystotomy performed more than half the operation is done, and the patient can then wait comfortably for a week or a month if necessary while being prepared for the second operation. Now that the back pressure has been temporarily relieved we can attempt to improve the kidney function. Time given these men will always improve to a point when they are safe for an operation.

Shock is next in order as a chief cause of death. If the bladder is drained and for a sufficient time the patient will improve to such an extent that he can withstand the short general anesthesia for the removal of the gland without great shock.

In the majority of these cases a very definite characteristic reaction is brought about by pre-operative treatment. It is characterized by a general weakness, irritability and restlessness. At the height of the reaction the specific gravity and other tests show that the renal function is below par. During the reaction there is sometimes evidence of an infection such as chill, increased temperature and a rapid pulse.

A functional test of the kidney should always be made at this time, and as a rule will always be found low. After the reaction due either to the instrumentation or the withdrawal of the urine has passed, the specific gravity which always falls after the introduction of the catheter or supra-pubic cystotomy will come back up. Under the treatment of the bladder with the indwelling catheter, or through the supra-pubic opening the kidney function will be greatly benefited and the resistance of the patient will be remarkably strengthened. As to the proper time for the second stage, it is necessary to study carefully the following features: General clinical appearance of the patient, functional renal test, (Thalene, blood chemistry, blood pressure and infection).

The second stage of the operation is done when the patient has reacted to the first stage, and the urine has come back to nearly normal. It has been proven by several

clinics that with the proper preparatory treatment more satisfactory results can be accomplished, and with a great deal more safety than if the preparatory treatment had not been carried out. Difference in opinion still exists as to the preference of the supra-pubic and perineal method, however the majority of surgeons seem to favor the supra-pubic method, as it gives a larger percentage of cures that have control of their urine.

The technique is as follows: After the bladder has been drained through the urethra the abdominal incision is made in the usual manner through the skin and fascia, the recti muscles separated. A medium incision is preferred to a small one as it makes the approach to the prostate more accessible. The fat in the supra-pubic space is dissected from the fundus of the bladder and the peritoneum may be accidentally opened. In case this does happen the rent is sutured and no bad effect as a rule follows. It is preferable to open the bladder without distending it with antiseptic fluids, and if this is done it will certainly save the soiling of the wound. The peritoneum having been pushed back, the bladder is lifted as far in the abdominal wound as possible. Gauze pads are packed all around the bladder so as to protect the wound. The bladder is brought forward by means of two lateral threads going through its wall, the wall of the bladder is then cut between the threads. The bladder is dried by sponging or aspiration out of any accumulation of urine or antiseptic solution that may remain in the bladder, or if the case is one of supra-pubic drainage, the supra-pubic opening is enlarged sufficiently to admit two fingers.

With the finger of the left hand introduced into the rectum the prostate can be pushed further into the bladder. The first and second fingers of the right hand are introduced into the bladder and the index finger pushed into the prostatic urethra, very easily breaks into the capsule through the point of least resistance. After the capsule has been ruptured the finger is gradually carried around the gland until the entire gland is freed from the capsule. It is very essential to stick close to the gland while it is being enucleated. After the gland is completely enucleated the capsule contracts quickly and the hemorrhage will stop in a short while. If the hemorrhage continues it is best to introduce a self retaining retractor into the incision of the bladder, thereby enabling one to see the

base and the prostatic region. With retractor in place it is possible to see any bleeding vessels and catch them. Most of the oozing comes from the torn bladder mucosa, although at times a fair sized bleeding vessel may be seen down in the prostatic capsule. Interrupted sutures placed to include a little of the bladder mucosa and considerable portion of the capsule controls bleeding in most cases, while this bleeding as a rule will always stop of its own accord, it seems that it is essential to have absolute control of it. In case the sutures do not control the bleeding, a gauze pack may be placed in the prostatic bed for twenty-four to forty-eight hours, or the Pilcher Haemostatic bag may be used. The loss of a small amount of blood in itself is not so important, but it may reduce the general resistance of the patient to infection, which it is very essential to maintain.

After all the bleeding has been checked and the clots removed from the bladder, a drainage tube is placed in the upper angle of the bladder wound. The bladder is closed with interrupted cut sutures up to the tube, none of these sutures including the mucous membrane. Small rubber drainage tube is placed in Retzia's space for at least forty-eight hours.

After drainage tube is fastened to the bladder the abdominal wound is closed with a figure eight silk worm gut sutures. Post-operative treatment should begin immediately on returning patient to bed, and consists in supporting patient and keeping the kidney function well up. This is done by the use of a hypodermiclysis and other stimulants. The main points to be considered are shock, hemorrhage, drainage, fluid intake and fever. Hemorrhage should be prevented by proper ligation, packing, infection by drainage; administration of fluids is very important given by mouth and rectum, subcutaneously and intravenously if indicated.

In cases of suppression following prostatectomy, glucose 10 per cent given intravenously will often have a desired effect upon the excretory function of the kidney.

When the urine has all cleared up the drainage tubes are removed and the supra wound allowed to heal. As a rule these patients as soon as their physical condition will permit, should be allowed up and everything done to increase their general resistance.

#### DISCUSSION.

Dr. L. B. Otken (Greenwood): In taking up the treatment of hypertrophy of the prostate I

would like to stress a little further than the Doctor did the too rapid emptying of the over-distended bladder. We must remember that these patients nearly all are past 50 and this is not an acute condition—it has been going on for months and years. If the bladder is enormously dilated and there is cystitis present, there is absorption of a great deal of toxic material. Bugbee of New York and O'Connor of Chicago have done a great deal of work on the blood pressure in these cases. They report one case of a drop of blood pressure following the emptying of the bladder from 170 to 120, death intervening in a few hours. We have all seen these cases brought in with the bladder enormously distended—nearly to the umbilicus, and with a suprapubic done and the urine catheterized the patient died in a few hours. I believe, and these men believe, that in that type of case that a catheter should be put through a small opening and clamped and not allow the urine to rush out all at once, and in that way you can tide over a great many of these cases. O'Connor says in that way you stabilize your prostatic patient. Following suprapubic or ureteral drainage the drop in blood pressure and pulse pressure may continue for several days. If you attempt to operate with the blood pressure going down you will kill the patient. They have shown by a large series of cases that if you wait until the blood pressure becomes stationary, that is, build it up a little and get it stationary and hold it there for five or six days, and then go ahead with the second operation, you stand a much better chance of getting good results and a living patient.

As to irrigation, we have heard a great many men say that you cannot put a self-retaining catheter in there because they have done so and it stayed five days and they could not get it out. If the bladder is irrigated with boric acid and sterile water there will be no trouble.

As to the anaesthetic, perhaps that is worth a few words. A great many of these cases carry a nephritis along with the prostatic hypertrophy. I believe in that type of case it is poor policy to give your patient ether. I know a great many surgeons are adverse to spinal anaesthesia, but it is a proven thing and if used in these cases will give good results. I believe spinal anaesthesia plus local anaesthesia, plus perhaps synergistic anaesthesia, will bring the majority of these cases through without ether. If you want to use something else, use gas oxygen.

As to the type of operation, whether suprapubic or perineal, I think it depends upon the technique perfected by the individual operator.

Dr. L. D. Dickerson (McComb). In my limited surgical practice of ten or fifteen years I have done very few prostatectomies. I have had no fatalities. I prefer the suprapubic route and the two-stage operation.

So far as the after treatment is concerned, it depends entirely upon the patient and upon the doctor. As the doctors have both stated, these are very unsatisfactory patients. I do just as few prostatectomies as possible.

Dr. P. G. Gamble (closing): Doctor Otken spoke of spinal anaesthesia as being preferable to ether. He also spoke of getting the blood pressure back up. How are you going to get your blood pressure up if you use spinal anaesthesia?



# New Orleans Medical and Surgical Journal

Established 1844

Published by the Louisiana State Medical Society under the jurisdiction of the following-named Journal Committee.

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**SUBSCRIPTION TERMS:** \$2.00 per year in advance, postage paid, for the United States; \$2.50 per year for all foreign countries belonging to the Postal Union.

Material for publication should be received not later than the twentieth of the month preceding publication. Orders for reprints must be sent in duplicate when returning galley proof.

THE JOURNAL does not hold itself responsible for statements made by any contributor.

Communications should be addressed to: New Orleans Medical and Surgical Journal, 1551 Canal Street, New Orleans, La.

## THE STATE MEDICAL SOCIETY

The Louisiana State Medical Society is making progress, but not commensurate with the desire of its enthusiastic members.

Why many good men in the State have not sought membership in their local society, or have dropped membership is not apparent. All must know that medical and social problems of vital interest to the public and the profession frequently arise and that the responsibility to take the initiative in their solution rests on those who are trained in medicine.

Although the *New Orleans Medical and Surgical Journal* has been greatly improved, additional features will be added and it will be larger and more satisfactory when funds are available. Will the State Societies of Louisiana and Mississippi help through organization of active local medical societies?

The physicians of these two states are true to the noble traditions of the profession and are actively concerned in the public health in every way. Humanity's appeal

has been answered in the development of sanitary science, bacteriology, preventive medicine and other measures for which the medical profession has given freely of time and effort and without cost.

In Louisiana an Act of the Legislature provides that Boards of Health shall be appointed or elected in every municipality and parish and that the local legislative body shall provide ample means for the maintenance and operation of the Board and for the promotion and conservation of the public health. Will the doctors tell us in how many parishes and municipalities this law has become effective? The Act states the health officer shall be a registered and licensed physician, skilled in sanitary science and that he shall exercise the powers and perform the duties usual and incident to such office.

This means that men qualified to fill the position must be elected and that a reasonable salary shall be fixed by the Board of Health and approved by the Police Jury or the Municipal Council. The laborer is worthy of his hire. Is it not the obligation of the medical profession, organized or unorganized, to see that this law is enforced when our police juries and municipal councils have taken an oath to support the constitution and laws of the State?

In a recent issue of the Pittsburgh Medical Journal there appears: "Ten Ways to Kill a Medical Society:

1. Don't go to the meetings.
2. If you go, go late.
3. If the weather doesn't suit you, don't think of going.
4. If you do attend a meeting, find fault with the work of the officers and members.
5. Never accept office as it is easier to criticize than to do things.
6. Get sore if you are not appointed on committees, but if you are, do not attend committee meetings.
7. If asked by the chairman to give your opinion on some matter, tell him you have nothing to say. After the meeting tell everyone how things should be done.
8. Do nothing more than absolutely necessary, but when members use their ability to help matters along, howl that the institution is run by a clique.
9. Hold back your dues, or don't pay at all.
10. Don't bother about getting new members—"let George do it."

The Journal of the Michigan State Medical Society also suggests: "Don't go to your Parish Meetings if—

1. You know everything already.
2. If you are impervious to new ideas when presented by others.
3. If you have reached the acme of excellence and efficiency.
4. If your ability cannot be improved.
5. If you can't see any benefit in discussing the other fellow's suggestion.
6. If you are too miserly to contribute some of your time to organized, cooperative effort.
7. If you have no use for your fellow-man. On the other hand if you want to be a part and an active supporter of your society—then go to every meeting."

In the Principles of Medical Ethics we read in Section 2, under the duties of physicians: "In order that the dignity and honor of the medical profession may be upheld, its standard exalted, its sphere of usefulness extended, and the advancement of medical science promoted, a physician should associate himself with medical societies and contribute his time, energy and means in order that these societies may represent the ideals of the profession."

If every member of the Medical Societies in Louisiana and Mississippi would bring into the society at least one new member until every physician, worthy and qualified, enjoyed membership in our State and National Medical Organizations, there would be a splendid altruistic organized force which could do more for the betterment of social welfare than any other body now organized.

Pasteur said at the opening of the Pasteur Institute in Paris: "Two opposite laws seem to me now in contest. The one, a law of blood and death, opening out each day new modes of destruction, forces nations to be always ready for the battle. The other, the law of peace, work and health, whose only aim is to deliver man from the calamities which beset him. The one seeks violent conquests, the other the relief of mankind. The one places a single life above all victories, the other sacrifices hundreds of thousands of lives to the ambition of a single individual.

It is the physician above all whose aim is to deliver man from the "calamities which beset him."

#### VACCINATION IN MISSISSIPPI

It is safe to say that an exhaustive search of the literature would fail to reveal a better demonstration of the efficacy of *systematic* vaccination than this:

"There has been no opportunity of ob-

serving variola in any form in this clinic for nine years; still it is necessary for every well informed physician to have a knowledge of this important disease. As a result of strict vaccination and re-vaccination, in Germany, the disease has been prevented from appearing, so that many physicians have never had an opportunity of seeing smallpox. However, on account of our great intercommunication with other countries, we may at any moment be required to treat the disease in travelers." (Variola, by Ch. Bäumler, in *Die Deutsche Klinik*, translated in *Infectious Diseases*, Salinger, New York, 1905). During the past few years, in several cities of Mississippi, children have been required to present a certificate of successful vaccination before being permitted to enter school. Recently, however, a lawyer came before the School Board of one city, to protest, on behalf of two Christian Science families, against the compulsory vaccination of school children because "it interfered with their religious liberty as guaranteed by the Constitution of the United States." He pointed out that, according to Mississippi laws (Hemingway Code, No. 4841, 1917 ed.) the Board of Supervisors of a county is the only agency in the State having the right to order compulsory vaccination, and that they may exercise this right only when they are convinced of the presence of an epidemic.

But when an epidemic occurs we know that our health officers are criticized. It is quite as necessary to educate the public to feel that preparedness against disease is needed just as much as is preparedness against the invasion of a foreign army. Systematic vaccination will provide such a defense against smallpox. All physicians know that vaccination of children at the end of the first year, with repetitions at the time of entry into school and at the eleventh and sixteenth years, would soon eliminate smallpox.

In addition to the rationality of such a procedure, it must be remembered that the panic that occurs when an epidemic exists is costly. Vaccinating only when an epidemic comes is as clumsy and as inefficient as is raising, equipping and drilling an army when a foreign invader has already set foot on our soil.

At present time, we are confronted with this situation: We have a law which makes attendance at school compulsory, but there is no law by which the health of the children who are thus compelled to go to school may be protected.

We should work for a standardized, model law, making regular vaccination compulsory in all states and thus in our own state remove from the shoulders of our County Supervisors the burden of the decision as to when the need for vaccination exists.

On account of the rapidity of travel today, a single case of variola is a potential menace to every community within a radius of one thousand miles.

We have eliminated yellow fever.

We can eliminate smallpox.

Let's do it!

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#### DYER MEMORIAL PRIZE

The graduates of Tulane University of Louisiana School of Medicine from 1908 to 1920 are to perpetuate the memory of their late Dean, Dr. Isadore Dyer, by an endowment fund to be known as the Isadore Dyer Memorial Medical Scholarship Fund, the income from which will be used yearly to provide a prize of such form as the executive faculty of the school may determine. The prize is to be given to the member of the graduating class who has made the highest combined average grade for four years of study in the Tulane School of Medicine.

Dean Dyer was loved and appreciated by all his students. He was ever the students' friend. By his high idealism and honesty of purpose he did much to inculcate in the minds of those who came under his influence, those high ideals and aims in life for which the best in the medical profession stands.

This movement has been fostered by Dean C. C. Bass and Miss Collens, the latter having served Dr. Dyer as private secretary, and who is still in the Dean's office. Entirely by voluntary contributions they have undertaken to raise this fund. We feel sure the amount necessary will be over-subscribed.

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#### OPHTHALMOLOGY A PROFESSION AND NOT A TRADE

"One of the functions of a society such as ours is to elevate the standard of ophthalmology and this by the correction of subtle influences that tend to bring the practice of a trade into our profession."\*

We reproduce the resolutions of the American Ophthalmological Society and the report of the Committee on the Optical

Question as requested by the judiciary Committee of the American Medical Association:

"Resolved, That we deprecate the selling of glasses by the ophthalmologist to the patient in communities where the services of reliable dispensing opticians are obtainable.

Resolved, That the acceptance of commissions or considerations, either directly or indirectly, by the ophthalmologists from opticians or optical houses is absolutely contrary to all standards of medical ethics and just as reprehensible as the splitting of fees."

At the meeting of the Section on Ophthalmology in Chicago, the Committee on the Optical Question reported as follows:

"At the request of the Judicial Council, your committee has considered the two questions of the furnishing of glasses by the ophthalmologist to his patients, and the acceptance of commissions by ophthalmologists from opticians and optical houses.

Your committee feels that the acceptance, either directly or indirectly, of a fee or consideration from the sale of glasses is so pernicious, reprehensible and underhanded as to require no comment. It should be stopped and our section should impose such penalties as lie within its power and recommend to the national societies the rejection of the application of ophthalmologists for membership who pursue such practices.

Your committee therefore recommends the adoption of the resolution."

The resolutions as adopted were practically the same as those stated above and adopted by the American Ophthalmological Society.

These resolutions are very apropos and will assist in correcting this tendency to commercialize a specialty in the profession. It offers an opportunity to many who could not discriminate and to right their reprehensible action. The ruling coming from such far reaching powers and voiced by the whole American Medical Association shows a desire to correct a potential evil existing in our midst.

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#### THE GORGAS MEMORIAL

During the past year, throughout the United States, the work of organizing the Gorgas Memorial State Governing Committee has been progressing. In some states the response has been most enthusiastic, while in others considerable effort has been necessary to bring home to the doctors, the importance of this movement

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\*George S. Derby, M. D., in his Chairman's address before the section of ophthalmology, A. M. A. meeting in Chicago, June, 1924.

to them, individually and collectively. Inasmuch as the Gorgas Memorial is primarily a medical movement and as such must have the united support of the profession if it is to make the proper impression on the general public, we take this occasion to outline briefly the Gorgas plan and to request the cooperation of our colleagues in bringing to a successful issue, this national health program.

We are planning to establish a Memorial for our former chief, Major General William Crawford Gorgas, not of marble or bronze, but a permanent, living organization in the form of a great health foundation typical of his work in research and curative medicine, that will unite lay men and doctors in an intelligent effort to obtain better personal health a health guild that will be supported and directed by the representatives of curative medicine.

The Gorgas Memorial consists of two phases:

1. An Institute in Panama for research in tropical diseases.
2. A health educational program in the United States and other countries that wish to co-operate and participate in the movement.

We are living in an age when people are knocking at all doors of knowledge and demanding that they be admitted. In the field of medicine who are so well fitted to meet this demand as those actually engaged in the practice of medicine? The doctors have a far more interesting and important message to deliver than any other group.

In the United States today there is scarcely a community that has not its quota of irregular "medical practitioners," so called. In many states there are strong organizations of the representatives of the various cults, whose theories are imposed upon an uninformed public. Public ignorance is encouraged by professional reticence and the result is the astounding growth of unscientific methods. If the profession is to maintain the high standing to which centuries of labor in behalf of suffering mankind entitles it, it is essential that a definite organized effort be made to familiarize the public with such facts as will impress upon it the importance of medicine's contributions to human welfare. A constant fund of proper health information through the newspapers, magazines, lectures, moving pictures and the radio, furnished by medical men and women of known reputation and standing, will direct the public to the proper source for medi-

cal advice and gradually eliminate the irregular practices constantly increasing.

One of the objects of the Gorgas Memorial is to furnish a channel through which this kind of information may be disseminated. It cannot be done by individual physicians. It must be conducted by a dignified, ethical organization, controlled by the medical profession. The name of Gorgas is synonymous with "better health." No more appropriate name could be adopted for a movement that has for its object, *the development of co-operation between the public and scientific medicine for the purpose of improving health conditions by implanting the idea in the mind of every individual that scientific medicine is the real authority in all health matters and as such should be recognized as the source of health instruction.*

Before we ask the public for financial and moral support, it is essential that the doctors of the country unite in support of this program. As a means to this end, Governing Committees are now in process of organization, on the basis of 100 members to every 1,000,000 population in each state, 75 per cent of the personnel of each Committee will consist of medical men and 25 per cent of influential laymen and women. The permanent activities of the organization will be supervised by these Committees in their respective states, in co-operation with the National Executive Committees.

An organization cannot operate without funds. We are endeavoring to raise an Endowment of \$5,000,000, the interest only of which will be utilized to carry on the work. The principal will be invested in trust securities and remain intact. None of the money thus obtained will be spent for buildings or equipment. The Republic of Panama has donated the site and guaranteed the initial buildings and equipment for the tropical research laboratories, in recognition of Gorgas' great work in Panama. Those invited to serve as Founder members of the State Governing Committees are requested, as they accept membership on the Committee to subscribe \$100 to the Endowment Fund, payable within two years. Every individual on the State Committee is a contributing member. When the medical nucleus of the organization is complete, a general appeal for funds will be made to the public.

The American Medical Association at its recent meeting in Chicago, passed the following resolution:

*Resolved*, That the House of Delegates of

the American Medical Association, convinced of the great promise which the Gorgas Memorial contains of benefit to humanity through improved knowledge of preventive medicine and tropical disease, and of its peculiar adequacy, as a tribute to our great leader and sanitarian, recommend to the organized profession of the country, through its constituent state and county societies, the enthusiastic support of the project."

J. A. Witherspoon, Tennessee.

Joseph Rilus Eastman, Indiana.

Thomas Cullan, Maryland.

W. H. Mayer, Pennsylvania.

F. B. Lund, Massachusetts.

The Memorial has also been endorsed by numerous other medical and civic organizations.

Every doctor is requested to take a personal interest in the Gorgas program and to see that his community is adequately represented on the State Governing Committee. Each County Society should appoint officially at least one of its members to serve on the State Committee. This is one foundation that is controlled by the practitioners of curative medicine and as such should be supported by every practicing physician. Let us pull together, "the doctor for the doctor."

Frank Billings

Gilbert Fitz-Patrick

Seale Harris

W. H. G. Logan

Samuel J. Mixter

G. H. de Schweinitz

Rear Admiral E. R. Stitt

George Crile

William D. Haggard

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#### MEDICINE ORGANIZED

Special efforts by the Councilors of the Medical Societies to organize the unorganized parishes of Louisiana and counties of Mississippi between now and the coming session of the State Medical, would be invaluable to the profession of both States.

We need in every parish and county a Society to be composed of every reputable, licensed graduate and practitioner of medicine in any of its branches. Sooner or later every reputable physician will find noblesse oblige he should be a member.

Each Society, or group of two or three parishes, should hold regular monthly meetings and the officers should present a profitable program.

Provision should be made occasionally for post-graduate courses and clinics with demonstrations that would be of practical value to the busy country, as well as the town, doctor.

The public should be invited to one or more meetings during the year that they might be better informed from a reliable source, the truths of medicine and what it stands for.

Membership in the local Medical Society carries prestige and the Society should have a voice in all matters relating to health and the welfare of their respective communities and the State, looking to better service and more effective cooperation.

The standards of medicine and the practice of medicine can be elevated better through Medical Societies than through individual effort, be that individual ever so competent.

Every community should be represented through its Medical Organization in all public councils wherein the health of the public is considered, discussed and where there is legislation proposed for enactment. All reputable members are provided with protection in malpractice suits and enjoy freedom from persecution. These are only

a few of the reasons why you should be a member of your local, State and National Medical Societies.

The *New Orleans Medical and Surgical Journal* goes to every member of the local Society. That member becomes a member of the State Medical Society and the National, but in order to enjoy fellowship in the National it becomes necessary of your own election to make the request and remit five dollars, which covers your national membership and the subscription to the *Journal of the American Medical Association*. Remember, every member of the State Medical Society is a member of the American Medical Association and is represented in the deliberations of that organization by the delegate to the meeting. But to be a FELLOW in the American Medical you make the simple request and pay the five dollars. Any Fellow of the A. M. A. may select instead of the American Medical Journal one of the special Journals with a credit of the usual amount on the special journal. There is no extra charge for those selecting the Journal on Children. An additional nominal amount is charged for the Archives of Dermatology and Syphilology, the Archives of Neurology and Psychiatry, the Archives of Surgery, the Archives of Internal Medicine and the Archives of Otolaryngology.

Every progressive physician realizes that research is progressing as never before in the field of medicine. "A reading of the special journals will quicken the diagnostic

sense and reveal to the general practitioner the largest worth-while advances in the special fields of medicine." Can a busy practitioner, interested in the welfare of those committed to his care, afford to be without these excellent Journals published by the A. M. A.? Remember, every Fellow, as well as every member of the State Medical Society, is interested in the affairs of the American Medical Association, as well as your State Medical. Every contributor to the dues is an equal stockholder. The American Medical Association owns its own building, and in this is housed one of the best and most up-to-date printing establishments to be found in the United States. We have more than one million dollars invested and from this we have a right to draw information and knowledge by the payment of a small amount assessed as dues.

On New Year's Day let us not forget Hygeia, the magazine of health which carries a monthly plain facts about health and disease. Subscribe, read and place on the table of your waiting room for your patrons.

This appeal is made to every reputable, licensed physician in our two States, to join the local Medical Society, as well as State, and pay your dues with request for Fellowship with the American Medical and receive one or more of its publications.

May every reader of this Journal during 1925, as well as those who may join our ranks, have a full share of peace and happiness in the coming year.

## MEDICAL ECONOMICS

*Chas. A. Bahn, M.D., Department Editor.*

### MEDICAL ECONOMICS, VI, MEDICAL RECORDS. PART 2

(Continued From Last Month.)

Our professional office records are usually divided into three parts: medical, financial, and administrative. The medical portion contains: (1) general information such as the name, age, sex, etc.; (2) the history or patient's statement; (3) the doctor's description of the ailment, not what is believed, but what is actually known as fact, seen, heard, and felt with tactile sensibility; (4) the treatment: hygienic, chemical, mechanical, surgical, etc.; (5) progress as seen through the patient's and doctor's eyes: and (6) the diagnosis or descriptive name of the ailment.

Last month we discussed histories. This month we will begin with the doctor's description of the patient's ailment, called objective findings. These should contain all information which can have any practical bearing on the patient's ailment or well-being which might directly or indirectly affect complete recovery. Some physicians may desire greater detail than is necessary, the majority lean to the other extreme.

In medical histories the grand idea is to understand through the patients' statements, the human being and ailment. In objective examination the grand idea is to see, hear, or feel everything which might have a practical bearing, more or less independently on the patient's statements. Interpretation is another story. One is often amazed at the difficulty that the untrained have in separating actual fact as transmitted by the senses from its interpretations, or what observations possibly mean. Ask the average medical student to describe any given condition as actually seen. The result will probably be a volley of four syllable Latin words, which are subject to a half dozen different interpretations and which do not represent what was actually seen at all, but an interpretation usually expressed in a hazy, ambiguous way. Learned reader, put yourself to this test. Write an accurate and complete description of any simple medical lesion in plain English words of one or two syllables which can be interpreted in but one way, and which express exactly what you know as fact. The chances are about one in ten that unless experienced you will succeed on the first trial.

We want, therefore, here to obtain in the best, easiest, and quickest way, independently of the patient's cooperation, all possible knowledge which has a possible bearing directly or indirectly on recovery or health restoration. Generally, what we do often, we do well, because as more of the better understood portion of any complex act is directed by our subconscious mechanism, our conscious or analytic powers have a better opportunity of explaining the more difficult. A systematic routine examination method has therefore the advantage of being misproof, in that one is sure to come in contact through one of the senses, with any deviation from the usual; and of being rapid, in that as we become trained, it is possible to take in a large number of co-related facts at one glance; and effective in having, after we become trained, a definite sequence. Routine systematic examination possibly has the

disadvantage that goes with concentrated effort; it is difficult to train one's faculties to repeatedly do any complicated act in the same way, even though it be the best way. Then there is the possibility of performing the act in a semi-conscious manner because one is too mentally lazy to stop, look, listen and ask why. Of course most of us would prefer that some mysterious force direct our eyes to the affected spot, hold them there until our consciousness was attracted, think out the matter for us and mentally serve the solved problem on a silver platter without effort on our part. Unfortunately, however, medical science cannot be usually learned in such a painless, workless, twilight sleep, way. What we get easily, we forget easily, which means that in the long race, the plodder and the flyer, as well as the hare and the tortoise, both carry about the same handicap, though in different ways.

Although it is mentally much easier to flit from cloud to cloud, we are more apt to miss valuable information about our patients' health problems by haphazard, than by routine, systematic examination methods which are capable of indefinite expansion until our problem is understood so far as medical science permits.

In ophthalmology a routine systematic examination is rather simple because the arrangement of the tissues make sequence easy and logical. Thus we begin with the face, including brows, lids and margins; then pass to the lid opening; the lacrimal apparatus, the eyeball; the conjunctivatae, of lid and eyeball; the sclera; cornea; anterior chamber; iris; pupil; lens; vitreous; papilla; retina and choroid, including vessels; noting changes of size; shape; color; position; and function; sensory, motor, secretory, and visual. If we have done this we are sure to have seen everything that could possibly be of value. Whether or not we understand what we have seen is another question. In ophthalmology, therefore, we have a misproof form of examination which in its simplest form can be made in about two minutes per eye, which comprises several hundred details and which is capable of indefinite expansion to include the most complicated conditions.

There is doubtless a similar examination form in every branch of medicine which facilitates obtaining all pertinent information in the best, easiest and quickest way. Time and patient effort are necessary for its mastery and personal variations should be made on anything that we adopt from others. Have you read Martinet's "Clinical Diagnosis and Objective Symptoms," which is written around this fundamental idea, also Cabot's Physical Diagnosis, etc.? If not, read them. You may get ideas which can be adapted to advantage in your daily work. I believe that in the past we have not devoted enough time and effort to the analysis and study of what we do and why we do it, especially pertaining to the understanding of our patients. It is much easier to let some celebrity do our thinking and make our mistakes:—but think of the sport one misses in not expressing one's individuality, in not making one's own mistakes, and in being blindly led by others.

The method that you select should be truly yours and best adapted to you, but it should be based upon sound fundamentals. Our object in this series of articles is not to think for you, but

to interest you in doing your own thinking along practical lines which will increase your usefulness.

If you do not have a systematic routine method of examination which is capable of indefinite expansion, why not begin today making one. Your first efforts were or will be crude, but with practice, one is surprised at the results as contrasted with the hit-and-miss method based on chance and accident which most of us have probably used.

The use of coding systems of one sort or another, whether as shorthand or abbreviations with numbers or letters to express degrees of intensity, may be of interest to some. The advantage is in the more rapid recording and more uniform grading of differences; the disadvantage lies in the fact that most of us can only learn shorthand in one form or another while in a plastic mental age and when our coordinative powers are at their maximum. Another disadvantage lies in the fact that abbreviated records are often difficult to read later, even by the writer. Abbreviations based on fundamentals, such as size, shape, color, position and function, often employ as the variable factors, letters or numbers to express degrees of intensity. Thus, a, b, c, d, e, and f may be used to type the severity of a condition, or 1, 2, 3, 4 and 5, plus or minus, to express variations from the average or normal. I will be glad to discuss the subject further with anyone interested.

A few words may not be amiss about diagnoses. Did it ever occur to you that your diagnosis should represent, in a few words, your very own description of the patient's ailment; its site, intensity, classification, cause, and anything else that might identify it and facilitate its better understanding. Why should we blindly adopt the names that others may give bodily ailments? Diagnosis should be ours, irrespective of what anybody else might name an apparently similar condition. It is better to name and classify an ailment our own way, if it represents our very best thought on the subject, crude though it may be, than to take blindly a name coined by the wisest man in the world. This may not be orthodox but it speaks for individual thought and understanding, which, after all, is the main thing. The sooner our profession learns to break with the mistakes of others and of the past, and the quicker we realize that each of us has to solve each problem on its own merits irrespective of what others may have done under apparently the same conditions, the better it will be for us and the public.

The financial part of our records should take into consideration the date and charge for each service rendered and the date and amount paid therefor. In a small practice this is perhaps best accomplished by the use of a part of the patients' record card, ruled for this purpose with four columns, preferably parallel; to contain the dates and charges and dates and payments. The daily total of these amounts are transferred to a loose leaf or bound volume, giving the total charges, collections, and outstanding bills for the next month, and thence for the year. In a larger

practice especially where several persons, possibly including the patient, handle the card, it becomes necessary to have a more permanent financial record. Here either the card mentioned above is used as a temporary work sheet or a daily list is made containing the names, charges and payments; these being transferred to a loose leaf or bound ledger, accounts receivable. An extra column may be devoted to allowances or deductions of charge which occur in every practice.

Depending upon the complexity of the organization, this idea may be elaborated indefinitely, even though there is a central cashier and bookkeeper who has direct charge and responsibility for all money and charges. The bonding of those who have charge of monies costs but very little, and does not imply a lack of confidence any more than fire insurance. It is simply a business precaution which an honest employee will appreciate and not resent. I recall an instance in which several doctors saved somewhat over four thousand dollars by having their cashier bonded.

Permanent records of our income and disbursements may be arranged on a single or double entry method of bookkeeping. The former is simpler and with certain modifications takes into account every cent taken in, paid out, and on hand, whether in money, bills receivable, or equipment, which is probably what you want to know. The underlying idea of this method is:—  
WHAT YOU HAVE AT THE BEGINNING OF THE ACCOUNTING PERIOD; accounts receivable, cash, and physical property as equipment, etc.; PLUS WHAT YOU TAKE IN DURING THE ACCOUNTING PERIOD; IS EQUAL TO WHAT YOU HAVE PAID OUT OR USED DURING THE ACCOUNTING PERIOD. PLUS WHAT YOU HAVE AT THE END OF THE ACCOUNTING PERIOD.

Our record system must, therefore, take into account all charges, collections, the value of physical property and disbursements, classified preferably on the basis used in our federal income tax returns; that is, equipment, which has more or less permanent value; supplies, which have no permanent life such as stationery, etc.; operating expense, such as rent, light, telephone, assistance, etc., which have no physical value; and withdrawals, the amount that you personally receive, or what is usually left, divided into taxable and tax exempt. This subject will be discussed later.

The ordinary multicolumn loose leaf ledger with six or eight vertical divisions, for the above mentioned items, and six horizontal divisions for the six working days of each week, enable one to maintain a bookkeeping system, inexpensively and simply by which one can easily be determined the daily, weekly, monthly and yearly bank balance, deposits, withdrawals, cash receipts, charges and disbursements; classified as equipment, supplies, operating expense and net profits. Income tax returns are simply a modification of the year's totals.

(To be continued.)

Kindly send inquiries, comment and criticism to Dr. Charles A. Bahn, 1551 Canal St., New Orleans, La.



# NEWS AND COMMENT

*Lucien A. Ledoux, M. D., Department Editor*

## TRYPARSAMIDE

The Rockefeller Institute for Medical Research has announced the release of the drug known as Tryparsamide for use in the treatment of human and animal trypanosomiasis (African sleeping sickness and *mal de cadéras*) and selected cases of syphilis of the central nervous system. This action is based on results reported from clinical investigations which have been in progress for several years. The drug will be manufactured by the Powers-Weightman-Rosengarten Co., of Philadelphia, and will become available through the regular trade channels about January 1, 1925. In releasing the drug for the benefit of the public, the Rockefeller Institute desires it to be known that the Institute does not share in any way in profits that may be derived from the sale of the drug, and that, with the cordial co-operation of the manufacturers, provision has been made for the maintenance of a schedule of prices on as low a basis as possible.

## MONTHLY BULLETIN OF THE ORLEANS PARISH MEDICAL SOCIETY

The activities of the Society for the year 1924 terminated with the annual election of officers which was held December 13th, 1924. The following members compose the new Board of Directors.

Dr. Urban Maes, President.  
Dr. Maurice J. Gelpi, 1st Vice-President.  
Dr. L. L. Cazenavette, 2nd Vice-President.  
Dr. Jerome E. Landry, 3rd Vice-President.  
Dr. Lucien LeDoux, Secretary.  
Dr. John A. Lanford, Treasurer.  
Additional members of the Board of Directors:  
Dr. Frederick L. Fenno.  
Dr. E. J. Richard.  
Dr. M. T. Van Studdiford.

The new officers will be formally installed Monday, January 12th, 1925, at 8 p. m. An attractive program has been provided, and an invitation is extended to all members, their families and their friends.

The joint meeting of the old and new Boards of Directors will be held Monday, January 5th, 1925, at 8 p. m.

Beginning with the New Year, all new members will be introduced to the Society the first meeting following their election to membership.

Membership cards for the current year will be issued to members upon payment of annual dues.

Approximately 500 copies of the Code of Ethics of the American Medical Association, which is the code of the Society, have been distributed among the membership.

A new membership class, *Interne Membership*, has been finally adopted by the Society. *Internes* in the City Hospitals are eligible and will enjoy full membership privileges. Upon completion of their Internship they automatically become active members. The dues have been fixed at \$5.00 per annum, \$4.00 to the Louisiana State Medical Society and \$1.00 to the Orleans Parish Medical Society. It is hoped that all eligibles will be canvassed and invited to join the Society.

Delegates and Alternates to the Louisiana State Medical Society Convention for 1925-1926 are as follows:

Delegates—Dr. Chaille Jamison, Dr. Henry Daspit, Dr. Lucien LeDoux, Dr. Paul Gelpi, Dr. John A. Lanford, Dr. Urban Maes, Dr. Allan Eustis, Dr. P. A. McIlhenney, Dr. Maurice J. Gelpi, Dr. F. J. Chalaron.

Alternates—Dr. J. E. Landry, Dr. L. L. Cazenavette, Dr. Geo. Hauser, Dr. M. T. Van Studdiford, Dr. F. T. Brown, Dr. W. A. Reed, Dr. O. C. Cassegrain, Dr. D. J. Murphy, Dr. Geo. H. Upton, Dr. W. H. Block.

The resolution of Dr. Maurice Couret in regard to Non-Professional Laboratory Technicians is in committee.

The following applicants have been elected to active membership: Dr. R. A. Hale, Dr. M. O. Miller, Dr. H. G. Ogden and Dr. L. J. Stookey.

Dr. Homer Dupuy and his Convention Committee very satisfactorily cared for the Southern Medical Convention, which was the largest in its history.

The present membership in the Society is 458.

Program for January:  
Monday, January 5th, 1925—Joint meeting of Board of Directors.

Monday, January 12th, 1925—Annual meeting.

Monday, January 26th, 1925—Scientific meeting.

"Every man owes some of his time to the up-building of the profession to which he belongs."—Theodore Roosevelt.

Reports received during the past six months, of medical activities, show a gratifying increase.

The News and Comments last month were fairly representative.

It is hoped that the secretaries of all local medical societies and other medical or health organizations from Louisiana and Mississippi will send from month to month news from their respective localities.

## SHREVEPORT MEDICAL SOCIETY

At the annual meeting of the Shreveport Medical Society in December the following were elected for the ensuing year:

President, Dr. E. L. Sanderson; Vice-Presidents, Drs. A. P. Crain and M. S. Picard; Secretary, Dr. R. T. Lucas, re-elected; Treasurer, Dr. J. Stamper; Historian, Dr. F. S. Furmna.

## OUACHITA PARISH MEDICAL SOCIETY

At the annual meeting of the Ouachita Parish Medical Society held in Monroe, in December, the following were elected for the ensuing year:

President, Dr. J. R. Vaughan; Vice-President, Dr. P. L. Perot; Secretary-Treasurer, Dr. J. T. French, re-elected; Delegates to State Society, in addition to Dr. Snelling, elected last year, Dr. J. Q. Graves.

Dr. C. Jeff Miller of New Orleans and Dr. A. A. Herold of Shreveport were present by invitation. The former read a highly instructive and much-discussed paper on "Caesarian Section; its indications and its limitations." Dr. Herold, as a visiting councilor, gave a general talk on the society, the Journal, etc.

Governor Fuqua has recently appointed the new Charity Hospital Board for the Shreveport Hospital. At its initial meeting this board elected Mr. W. W. Campbell president, and Dr. J. M. Moseley of Arcadia, Louisiana, superintendent. Up to this writing there has been no further announcements as to the policy of the new administration or as to the personnel of the new staff.

The Tristate Sanitarium, the latest addition to Shreveport's private hospitals, was opened on Thanksgiving night with a public reception. It is owned by Drs. Pirkle and Williams of Shreveport, and is situated on Greenwood Avenue, near the Fair Grounds.

#### WASHINGTON PARISH MEDICAL SOCIETY

The Washington Parish Medical Society held its December meeting in the dining rooms of the Pine Tree Inn, Bogalusa, Louisiana, December 18th, 1924.

The meeting was one week earlier than the regular monthly meeting for this month, but the date for the regular meeting was Christmas day, and the society at its last meeting decided it would be better to hold this meeting a week earlier.

The scientific program consisted of a paper, "Headaches," by Dr. W. A. Martin. Discussion opened by Drs. Pierce and Jones.

This meeting was the annual meeting of the society, and an especially good time was had. New officers for the ensuing year were elected.

#### LAFORCHE PARISH MEDICAL SOCIETY

The Lafourche Parish Medical Society held a meeting in Thibodaux, Louisiana, on November 21st, at which time the following officers were elected for 1925:

President, Dr. F. T. Gouaux, Lockport; Vice-Presidents, Dr. C. J. Barker, Thibodaux; Secretary-Treasurer, Dr. P. H. Dansereau, Thibodaux. Delegates to the State Society meeting, Dr. J. J. Ayo, Raceland, and alternate, Dr. C. J. Barker, Thibodaux.

#### WEBSTER PARISH MEDICAL SOCIETY

The Webster Parish Medical Society met on Wednesday, December 17th, at 2 p. m., in the First Baptist Church at Minden.

Dr. W. McDade read a paper on the progress in Medical Science made in the past 100 years. Dr. J. B. Benton of Minden read a paper on Pyelitis. Dr. R. T. Lucas and Dr. W. S. Kerlin of Shreveport were visitors and read papers, the former on "Some Practical Points in the Artificial Feeding of Infants" and the latter on "Pulmonary Abscess with Demonstration of X-Ray Plates." There was a good attendance and the papers were well discussed.

A resolution was passed endorsing the Tuberculosis and Public Health Association of Louisiana.

Officers for the year 1925 were all re-elected as follows: Dr. W. McDade, of Minden, President; Dr. J. D. Kilgore, Minden, Vice-President; Dr. C. M. Baker, Minden, Secretary-Treasurer. Dr. J. B. Benton and Dr. W. McDade were elected Delegate and Alternate to the State Society meeting.

#### MEDICAL SOCIETY OF THE MISSOURI VALLEY

The thirty-seventh annual meeting of this association was held at Des Moines, Iowa, under the presidency of Dr. H. J. Lehnhoff, Lincoln, September 17, 18 and 19, in conjunction with the annual clinics of the Polk County Medical Society. The success of this meeting has demonstrated the value of diagnostic clinics in connection with symposia. The morning hours were devoted entirely to clinics, while the afternoon sessions were occupied by the reading of papers and discussion, following symposia on various topics.

Dr. Robert A. Strong of Pass Christian, Miss., formerly Professor of Clinical Pediatrics, School of Medicine, Tulane University, who is now editing the International Medical Digest, which is published in Hagerstown, Md., is spending the winter months at his home on the Gulf Coast.

#### THE AMERICAN BOARD OF OTOLARYNGOLOGY

The American Board of Otolaryngology was organized in Chicago on November 10. The following constitute the board of directors. Drs. Harris P. Mosher, Boston, president; Frank R. Spencer, Boulder, Colo., vice-president; Hanau W. Loeb, St. Louis, secretary and treasurer; Thomas E. Carmody, Denver; Joseph C. Beck, Chicago; Thomas H. Halstead, Syracuse, N. Y.; Robert C. Lynch, New Orleans; Burt R. Shurly, Detroit; Ross H. Skillern, Philadelphia; William P. Wherry, Omaha. The office of the Board is at 1402 South Grand Boulevard, St. Louis, Missouri.

The Board comprises representatives of the five national otolaryngologic associations: the American Otological Society, the American Laryngological Association, the American Laryngological, Rhinological and Otological Society, the American Academy of Ophthalmology and Otolaryngology and the Section of Laryngology, Otology and Rhinology of the American Medical Association.

#### RELIEF FOR A STRICKEN CITY

A shipment of Anti-Plague Serum and Bacteria, produced in the Biological Laboratories of the H. K. Mulford Company, Philadelphia, Pa., was sent across the continent by airplane in the early days of November, in response to calls for help from Los Angeles.

#### UNITED STATES CIVIL SERVICE EXAMINATION

Applications for medical interne (psychiatric) will be rated as received until June 30, 1925. The examination is to fill vacancies in Saint Elizabeth's Hospital, Washington, D. C., at an entrance salary of \$1,860 a year.

#### REMOVALS

Dr. O. F. Ernst, from 1226 Maison Blanche Bldg., to 503-505 Physicians' and Surgeons' Bldg.  
Dr. I. J. Irwin, from New Orleans, Louisiana, to Larose, Louisiana.

## OCTOBER MEETING OF NORTH LOUISIANA STAFF

Regular monthly meeting of the North Louisiana Sanitarium Staff met in the assembly room. Dr. Thomas Ragan, President, in the chair.

After transaction of routine business the hospital record for September was analyzed. Of the two deaths, one was from ruptured appendix and the other followed resection of the bowel. The "unimproved" was discussed and satisfactorily explained.

Dr. Abramson reported a case of carcinoma of the esophagus of about a year's duration, which had been in the Sanitarium twice recently. It had been treated by deep therapy and later on required gastrostomy. Drs. Herold and Sentell, who also treated the case, discussed it, the former explaining the number of mistaken diagnoses made, both in Shreveport and in New Orleans. Dr. Murphy showed with his X-ray studies the nature of the case. He then exhibited the X-ray plates, demonstrating the lesion.

Dr. Abramson reported two cases of chronic appendicitis, stressing the point that removing the diseased appendix does not always necessarily cure the patient. Discussed by Drs. Rougon, Crain, Herold, Rigby and Stamper. Dr. Herold exhibited a case of aneurysm of the thoracic aorta with rather low systolic pressure. Dr. Paine reported a similar case.

Dr. Murphy reported a case with X-ray findings of sub-deltoid bursitis, markedly improved by diathermy. Discussed by Drs. Abramson, Durham and Ragan.

Dr. Durham reported a case of congenital deformity of the foot in a three-weeks-old baby, with marked improvement following plastic operations.

Dr. Rougon reported a case of gonorrheal arthritis, involving the cervical vertebrae, which recovered under appropriate treatment with vaccines.

Meeting adjourned until December.

## PUBLICATIONS RECEIVED

C. V. Mosby Company, St. Louis: "Modern Methods of Treatment," by Logan Clendening, M.D. "The Treatment of the Common Disorders of Digestion," by John L. Kantor, Ph.D., M.D. "The Science and Art of Anesthesia," by Colonel William Webster, D.S.O., M.D., C.M. "Life Insurance Examination," edited by Frank W. Foxworthy, Ph.B., M.D.

The MacMillan Company, New York: "Hospital Organization and Operation," by Frank E. Chapman. "The Internal Secretions," by Dr. Arthur Weil. "Anesthesia," by James Taylor Gwathmey, M.D.

P. Blakiston's Son & Co., Philadelphia: "A Manual of Histology," by Henry Erdmann Radasch, M.Sc., M.D. "Insanity and Law," by H. Douglas Singer, M.D., M.R.C.P., London. "Concealed Tuberculosis, or the Tired Sickness," by George Douglas Head, B.S., M.D.

Paul B. Hoeber, Inc., New York: "Guy Patin," by Francis R. Packard, M.D. "Transactions of the American Proctologic Society, Twenty-fourth Annual Session," "Diabetes," by Philip Horowitz, M.D.

W. B. Saunders Company, Philadelphia and London: "A Manual of Obstetrics," by John

Cooke Hirst, M.D., F.A.C.S. "A Text-book of Pathology," by W. G. MacCallum.

Lea & Febiger, Philadelphia and New York: "Modern Methods in the Diagnosis and Treatment of Renal Disease," by Hugh Maclean, M.D., D.Sc. "Hygiene and Public Health," by George M. Price, M.D.

G. W. Carnrick Co., New York: "Organotherapy in General Practice."

William Wood & Company: "Medical Record Visiting List."

## REPRINTS

"Meaning of Functional Nervous Diseases, Mechanism and Management," by Tom Williams, M.D.

## BOOK REVIEW

Local Anesthesia Methods and Results in Abdominal Surgery, by Dr. Hans Finsterer. Authorized English version by Joseph P. F. Burke, New York. Rebman Company, 1923.

Having had the pleasure of assisting the author in his demonstration at Charity Hospital, New Orleans, it gives me great pleasure to review text.

The book begins with a thorough resume of the use of anesthesia, conductive, splanchnic, paravertebral, parasacral methods, tracing its use in the European clinics and its advocates in France and America. The importance of anesthesia for the result of abdominal operations, is brought out, showing the effect of general narcosis, on lowering blood pressure, that has already been affected by toxins and lowering of intra-abdominal pressure following laparotomy. He emphasizes the relief by local anesthesia, assisted by intra-muscular injections, infusion, etc. He analyzes Schrer and Weisel's explanation of surgical shock, and brings out the effect of general narcosis on the liver. He interprets post-operative complications, i.e., vomiting, intestinal atony, interruption in peristalsis, acute peritonitis and pulmonary disturbances. The comparison is made of pulmonary complications as a result of local and general anesthesia, in addition to giving methods of facilitating expectoration, especially in the aged. The indications and contra-indications for local anesthesia in preference to general narcosis are emphasized by his saying, "The chief dangers of every major operation are due to general anesthesia and its harmful results."

In cases of psychically excited patients, he uses a preliminary preparation of pantopon, morphin, atropin. In cases of appendicitis, cholelithiasis, he uses a combination of beginning narcosis (Ether Rausch) and subsequent local anesthesia, never using chloroform. With patients over fifty years of age, conductive anesthesia alone is used. In gastric cases splanchnic anesthesia alone is the one of choice and Ether Rausch only when absolutely necessary. In obese cases, the use of 1-4 per cent instead of 1-2 per cent novocain is advocated, infiltrating the line of incision. In inflammation in the abdominal cavity a combined anesthesia is the preference.

In the next chapter he discusses solutions,—synergistic action of quinine-sulfate, the addition of hydrochloric acid to prevent the decomposition of adrenalin, the limit of quantity injected and the safeguards when injected. The anatomical facts brought forth show why it is necessary to use splanchnic, paravertebral and parasacral anesthesia, also showing the technique of splanchnic

nic anesthesia (Braun's Kappis' or Nageli's). In operating umbilical and ventral herniae the standard procedures are used.

In appendectomies in anesthetizing a fan-shaped infiltration of the abdominal wall and a special method of injecting the iliac cavity is used, in operating a physiological incision, that is, muscle splitting, plus incising the rectus sheath 1 cm. upward and downward. Finsterer believes that in true diffuse peritonitis following appendicitis, a thorough irrigation with a salt solution is advisable. Ether is harmful (from the formation of adhesions). In acute suppurations use local infiltration of the abdominal wall and ether during the cleansing of the abdominal cavity. Acute suppuration in the iliac fossa is no contra-indication for deep injection, as it is made far away from the inflammatory area. Operations on the cardia and esophagus are unsatisfactory. In treating cardio-spasm, use splanchnic anesthesia and the Heller operation. Under the head of gastric resection the author differentiates methods and points out the advantage of the "resection with typical anastomoses" (Hofmeister or Finsterer method), favoring the idea of Narreth for a standardization of methods, either by proper name or otherwise. He gives the differentiation of the Billroth No. 1, Billroth No. 2, Haber, a true Kromlein, a Mikulicz, or Kromlien-Mikulicz, a Reichel or Polya, and Hofmeister or Finsterer method. He gives a complete description of the Finsterer method, showing how the stomach should be severed and the anastomosis performed. The essential point is to prevent retrograde filling of the duodenum (1) incision of stomach obliquely and in perpendicular axis of body, (2) utilizing the lower part of the cross-incision of the stomach, (3) the ascending loop must not be too short, so that one can fasten it high enough for closing of the stomach wall. Under the heading of duodenal ulcer, the author tells us when to make unilateral exclusion of van Eiselsberg or the resection of stomach for the exclusion of the duodenal ulcer. Re-operations for septic ulcers of jejunum are difficult and the length of operation is from 2 1-2 to 5 hours. The anesthesia used is conductive with the assistance of ether. The radical operation is an extensive resection of the stomach with the anastomosis, the pylorus and adjacent duodenum and the descending loop of the anastomosis is also removed (20-50 cm.) using different methods to restore the continuity. Finsterer does not favor gastroenterostomies except in advanced carcinoma. He then uses an anterior gastroenterostomy with an entero-anastomosis. In acute gastric and duodenal perforations, he favors local anesthesia—19 times suture of ulcer plus gastro-enterostomy, 3 times resection, 4 cases simple suture.

In operations where there is acute hemorrhage he favors immediate interference. (Within 48 hours, 17 resections. Later than 48 hours, 32 cases, 10 deaths. 22 resections, 6 deaths.) In the post-operative treatment for hemorrhage he favors the Oelhecker method of transfusion and cautions against large doses of morphia. In surgery of the bile passages he reports unfavorable results due to ether—liver changes referring to the work of Widal, Abramim and Hutnal. He favors cholecystectomy removing the gall-bladder from the fundus to the cystic duct. A small drain is used in all cases. Within the past two years he has used mostly Braun's anterior Splanchnic anesthesia. In 156 cholecystectomies

no fatalities. For stone in the common duct he formerly used a trans-duodenal choledochotomy, now uses for the past year a wide anastomosis between the choledochus and duodenum. To prevent possible icteric post-operative bleeding he uses X-ray treatment of the spleen to increase the coagulability of the blood. He has found operations for carcinoma of the gall-bladder unsuccessful. Brutt found in 43 cases of primary carcinoma of the gall-bladder, gall-stones present in all. Cholecystenterostomy was performed eight times. Palliative methods are given preference in neoplasms. A special danger in these cases is post-operative hemorrhage due to jaundice, treated by X-ray, as previously mentioned.

A valuable sign in liver injuries is a primary bradycardia due to the effect of absorption of bile acids. The prognosis is improved by using an Ether Rausch for exploration and conductive anesthesia if necessary.

In splenectomy he uses either an Ether Rausch or splanchnic anesthesia, but preferably paravertebral anesthesia (eighth dorsal to second lumbar nerves).

In cases of intestinal obstruction, he specifies not to use fan-shaped injection of abdominal wall, but to infiltrate in layers. He is also a firm advocate of abdominal irrigation, (20-30 litres of salt solution in cases of acute peritonitis). In these cases an entero-anastomosis and complete intestinal exclusion according to the method of Hochenegg has great advantage in allowing inflammatory adhesions and suppuration to reduce and make a secondary extirpation of the excluded bowel possible without danger.

In resection of large intestines resection about the flexures can be done with conductive anesthesia of abdominal wall and mesentery, but with resection of ascending and descending colon (over a broad area) Ether Rausch is necessary. The anesthesia of choice is paravertebral (tenth dorsal to fourth lumbar nerve). The results are better with a resection and primary suture of both ends. The essential in a lateral anastomosis is a wideotomy near the blind end and suturing the blind ends to the intestinal wall. Radical operations for carcinoma of the rectum are performed best under parasacral anesthesia (Braun's)—if insufficient, may inject anterior to the fifth dorsal vertebra, to block off communicating fibers connecting with the splanchnicus (Finsterer). The author reports 75 radical operations for rectal carcinoma with nine deaths (12 1-2 per cent mortality). For high rectal carcinoma a combined abdominosacral operation is advised, using conductive anesthesia for abdominal wall, Ether Rausch for mobilization of the sigmoid and parasacral for the resection. A primary Cholestomy of the transverse colon is best to reduce the number of wound infections.

For operations on the female genitals, he refers to Thaler of the Shaute clinic and his method of para-uterine infiltration anesthesia.

An apology for including kidney operation under abdominal operations with reference to those operated upon transperitoneally and a splendid field for conductive anesthesia, is the concluding paragraph. The author favors the paravertebral method as recommended by Lawen and Kappis.

The book is well-written, with conclusive data and should be read by all doing abdominal surgery.

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Owned and Published by THE LOUISIANA STATE MEDICAL SOCIETY

OFFICIAL ORGAN MISSISSIPPI STATE MEDICAL ASSOCIATION AND ORLEANS PARISH MEDICAL SOCIETY

\$2.00 per Annum, 25c per Copy  
Volume 77, Number 8

FEBRUARY, 1925

Published Monthly in New Orleans  
at 1551 Canal Street

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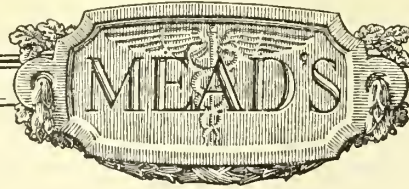
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FEBRUARY, 1925

No. 8

## A SURVEY OF A SERIES OF OBSTETRICAL COMPLICATIONS FROM THE RECORDS OF CHARITY HOSPITAL

C. JEFF MILLER, M.D.,

NEW ORLEANS

In the handling of puerperal infection the old methods of active local treatment, including intra-uterine douches, repeated curettages, and even radical abdominal operations on the tubes, ovaries and uterus have been largely superseded by a more conservative method, which includes strict non-interference except on specific indications, the avoidance of intra-uterine manipulations of any sort, the limitation of surgery to the opening of pus collections, symptomatic treatment, and the employment of routine measures to build up the patient's general resistance. Unfortunately, however, these new principles are not as generally applied as they might be in spite of the fact that statistics have long since proved that the old radical methods result in a most distressing mortality and morbidity.

It is not my intention to review the etiology and pathology of puerperal sepsis in this paper, but there are a few facts, now generally accepted, which I think might well be emphasized again:

1—Puerperal infection is really a wound infection, which is primarily a local process due to bacterial invasion, and whose outcome varies according to the reaction of the tissues, the virulence of the invading organisms, and the general resisting powers of the patient.

2—Many cases formerly regarded as merely local infections are true blood stream infections.

3—Many bacteria formerly regarded as

purely saprophytic are now believed capable of living in the tissues.

4—Any infection of the genital tract, no matter what its type, is capable of becoming a general systemic infection.

The old radical methods of treatment were based upon gross pathology, with an entire disregard of the methods of bacterial invasion. The new methods recognize that the principles of bacteriology and pathology have a general application no matter what structure of the body is concerned. When the infection is localized, as for instance in the various types of endometritis, nature has established a protective mechanism and here as elsewhere excessive manipulation will simply break down this established protection and convert a strictly localized process into a true blood stream infection. On the other hand, when once the infection has passed beyond its local stage and becomes a systemic affair, no amount of local treatment will have the slightest effect. It is evident, then, that in neither type of infection is local treatment indicated: in the local process it is unnecessary because it is harmful, and in the systemic type it is unnecessary because it is useless. It is upon these main principles that the newer conservative methods of treatment are based.

For the last ten years there has been provided at Charity Hospital a ward on the white female service to which are assigned all cases of frank or suspected pelvic infection originating during pregnancy or the puerperium, including cases delivered outside the hospital and infected puerperal cases from the inside obstetrical service, as well as the various incidental and accidental complications of pregnancy. It can be readily perceived that a great variety of conditions and complications will be met with in such a service, and it has occurred to me that a review of the cases over a

given period of time would be of considerable interest, particularly as during the entire time the ward has existed no radical treatment of any sort has been employed and only a strictly conservative policy has been followed. The cases cover a period of three years and for convenience in grouping I have classified them as abortions, premature labors, puerperal cases, and incidental and accidental complications of pregnancy. Cases transferred from the gynecological service for a period of rest before operation are also handled in this ward, but they have not been included in this survey. They were practically all cases of inflammatory disease and present no features of special interest. The only treatment was absolute rest plus whatever symptomatic treatment was indicated.

The treatment of abortions, premature labors and puerperal cases naturally varies in some details, but in general the following routine is strictly observed:

1—Immediately on admission a careful general examination is made to exclude intercurrent disease and constitutional disorders, and a routine urinalysis is done, together with blood count and Wassermann.

2—A detailed pelvic examination follows, repeated at 48 hour intervals if the patient shows signs of infection. A temperature of 100.5 on admission or developing after admission and persisting for more than 24 hours is regarded as definite evidence of infection.

3—If abortion or delivery is inevitable it is conducted in the most conservative manner possible, operative measures being employed only on the strictest indications, and a careful asepsis being observed.

4—If the uterus is well contracted and the cervix closed, no attempt is made to invade the cavity, even for the collection of smears. The strict observance of this principle will explain the relatively small number of positive intra-uterine cultures in this series. We feel that such knowledge is largely of prognostic value, and that the danger of intra-uterine manipulations more than counterbalances its usefulness. Moreover, a well contracted uterus rarely if ever contains debris, and if it does, in the majority of cases it will eliminate it by natural forces.

5—If the uterus is soft and boggy, the os patulous, and portions of placenta, membranes and blood clots are protruding, they are removed with the finger or sponge for-

ceps, but preferably the finger, in order to establish drainage. Hemorrhage usually ends with their removal.

6—In incomplete abortions sufficient time is allowed to elapse for the uterus to empty itself. It is surprising how many of these cases will terminate naturally if they are let alone and pituitrin and ergot are used to aid in the contractions. If the hemorrhage is severe a firm vaginal pack is employed, and is usually followed by the discharge of the remaining secundines. This is particularly true of criminal abortions. Even if there is definite evidence of debris in the uterus we think it wiser to defer active measures until all signs of infection have subsided; if bleeding demands interference the pack is usually all that is required.

7—Under no circumstances is the curette used in our service and intra-uterine irrigations are practically never permitted. We have found that the routine employment of both these measures leads to severe reactions and often gives rise to a temporary bacteriemia or even a general systemic infection.

8—In missed abortions the case is left to nature unless definite septic indications demand interference. It has been my experience, not so much in this ward, where the number of cases was small, as in my private practice, that the majority of such cases will complete themselves spontaneously. If evacuation of the uterus is definitely indicated, the introduction of catheters or a firm vaginal pack, with a slight packing of the cervix, will ordinarily precipitate uterine contractions, and the case may then be left to nature or the delivery be completed according to the routine obstetrical indications. Routine active treatment, including manual dilatation and curettage, often gives rise to surprisingly grave complications including hemorrhage, high temperature, and even septicemia.

9—Blood cultures are made in all cases of frank or suspected septicemia at the height of temperature following a chill, and are repeated at regular intervals. Positive cultures resulted in a very small percentage of cases, even where every clinical symptom pointed to an overwhelming septicemia. These results largely parallel those from other clinics, and it is difficult to say just where the fault lies.

10—Vaginal douches are not employed except in parametritis and other exudative conditions. The necessary manipulations simply add to the discomfort of the patient

and their routine employment may even be productive of harm.

11—Pus collections are evacuated through the vagina or at Poupert's ligament according to indications, but no other surgery is permitted. Exudative processes are never opened. Tubo-ovarian abscesses are transferred to a gynecological service after the acute symptoms have subsided.

12—Serums and vaccines have been used in a fair percentage of cases, but the results have practically always been disappointing. The same may be said of blood transfusions. Beyond severe constitutional reactions and possibly some slight temporary benefit their results in this clinic have been negligible.

13—Our general treatment includes absolute rest in all cases, with Fowler's position to favor drainage. Opiates and sedatives are used sparingly as indicated, and the ice cap is used over the abdomen for pain. Temperature is controlled by ice caps, cold sponges, possibly cold rectal irrigations, but never antipyretics. Nourishment is given at frequent intervals, and in severe cases of sepsis or anemia the fluid balance is maintained by saline and glucose drips, hypodermoclysis, and infusions, sometimes of the continuous type. The patient is kept in the fresh air and sunshine as much as possible, and other symptomatic treatment is employed as the indications arise.

I have quoted from the statistics at considerable length, even at the risk of monotonous repetition, because the real value of conservative treatment cannot be appreciated unless it is realized in how grave a condition many of our patients came to us. Over 50 per cent, for instance, entered with temperature over 100.5, the dividing mark between infected and non-infected cases, and elevations from 104 even to 107 were relatively frequent. A large number, too, were subjected to manipulations of the gravest character on the outside, and questioning showed that in many instances not the slightest attempt at asepsis was made. The complications which followed illustrate very well the course of a pelvic infection which has been either neglected or treated by ill-judged methods, and our results prove the value of conservative treatment even in the most extreme cases.

#### *Abortions*

1—Inevitable—16 cases. All of these patients were admitted with the cord prolapsed, the membranes ruptured, or some

extremity presenting, therefore the only possible treatment was to aid the delivery. Four cases delivered spontaneously, 11 were packed, and in one (6 months pregnant) a bag was introduced and version done for hemorrhage. Two of the feti were macerated, and one child lived for 30 minutes. Two of the mothers had positive Wassermans. Eight patients were admitted with temperature over 100.5, but in every instance the infection must have been of a mild type as this series gave rise to no complications and no mortality.

2—Incomplete abortions—125 cases. The age and parity are unimportant but it is interesting to note that one patient gave a history of 5 still-births and 7 abortions and was unmistakably syphilitic. Hemorrhage of more or less degree was present in every case; 7 of the patients had had one or more chills and 7 were admitted in a state of shock, in 2 the pulse being imperceptible. Sixty-three had temperature over 100.5, and in 26 cases it ranged from 102 to 105. Twenty-eight admitted definite manipulations on the outside (it is probable that many of these cases were of the criminal type), including repeated examinations by midwives, packs, vaginal and intra-uterine douches and curettements. In 6 cases the hemoglobin was below 45, 4 patients had positive Wassermans and 2 positive smears, and one urinalysis showed 8 percent of albumin. In one instance the uterus was almost completely prolapsed. The blood culture was positive in only 2 cases, the infecting organism being colon bacillus. The uterine cultures were positive in 5, the organisms including colon bacillus, streptococcus, gonococcus, and 2 mixed infections. In 3 cases the placenta was luetic and there were 6 macerated children. Thirteen and six-tenths per cent of this series developed complications, including, besides 6 cases of septicemia, salpingitis, cellulitis, thrombophlebitis, peritonitis and broncho-pneumonia. Accidental complications included tonsillitis, malaria, ovarian cyst, epilepsy, pyelitis, and one complete tear. The mortality was 0.

3—Complete abortions—84 cases. Three of these patients were admitted in a state of shock, 14 were bleeding, 5 had had one or more chills, and 1 had an acute retention of urine. Thirty had temperature over 100.5, 23 being between 102 and 105. Treatment outside included repeated examinations, packs (one patient was packed 4 times), vaginal and intra-uterine douches,

and curettements (one patient was curetted twice and another 8 times). Eight had positive Wassermans, 3 positive smears, and one had both. One patient had sugar in the urine. In 2 instances the placenta was luetic, and there were 8 macerated feti. Only one blood culture was positive, staphylococcus, and 5 uterine cultures were positive, including gonococcus, staphylococcus and colon bacillus. Twenty-two and six-tenths per cent developed complications, including, besides 2 cases of septicemia, salpingitis, parametritis, thrombophlebitis, cellulitis, oophoritis, peritonitis and tubo-ovarian abscesses. Malaria was the only non-obstetrical complication. The mortality was 0.

4—Criminal abortions—44 cases. The means included drugs, douche nozzles, instruments of various sorts, elm sticks, catheters, packs, intra-uterine douches, and rupture and extraction. Three patients were admitted in a state of shock, 20 were bleeding, 3 had had one or more chills, and in one instance the cord was broken and the cervix lacerated. Twenty were of the complete type and 24 were incomplete. Three patients had positive Wassermans and 3 positive smears. Six feti were macerated and there was one luetic placenta. Twenty-nine patients were admitted with temperature over 100.5, and in 24 instances it was between 102 and 107. There were no positive blood cultures and but 2 positive smears, gonococcus and staphylococcus. Twenty-five per cent developed complications including, besides 8 cases of septicemia, salpingo-oophoritis, pyosalpinx and pyelitis. The mortality was 4, 9.1 per cent, all cases of septicemia, complicated by peritonitis and lobar pneumonia in one case, typhoid and acute nephritis in another, parametritis in the third, and peritonitis in the fourth. As the last case was admitted moribund and died within 24 hours, the corrected mortality would be 6.8 per cent for the series.

5—Threatened abortion—27 cases. Three of the patients had temperature from 101 to 104 and 4 had positive Wassermans. Complications included oophoritis and hookworm. It might be pointed out in this connection that while hookworm is a relatively infrequent complication of pregnancy it is a very serious one because of the extreme anemia and impoverished condition it brings about. All of these patients were discharged with their symptoms relieved and every indication that the pregnancy

would continue to term. The mortality was 0.

6—Missed abortions—7 cases. All of these patients gave a typical history, definite objective and subjective signs of pregnancy, then a decrease in the size of the abdomen, but no re-establishment of the menses. Three were admitted with fairly severe hemorrhage, and 2 with a foul yellowish discharge. Two had definite septic symptoms. The mortality was 0.

#### *Premature Labors*

1—Threatened—3 cases. One patient had a positive Wasserman. Under routine treatment all symptoms disappeared. The mortality was 0.

2—Actual—22 cases. Two of these patients had delivered themselves on the outside without assistance, one sustaining a complete tear involving the cervix, perineum, urethra and vulva. Another case, delivered by a midwife and complicated by placenta previa, also had a complete tear. Two patients had had repeated examinations and one had been delivered by forceps. Fourteen were admitted with temperature from 100.5 to 104. There were two positive blood cultures, one staphylococcus and one mixed, and one positive uterine culture, gonococcus. Forty-one per cent developed complications including, besides 6 cases of septicemia, only cellulitis. The only non-obstetrical complication was tuberculosis. One patient died, a mortality of 4.5 per cent, of salpingitis, parametritis, peritonitis, and lobar pneumonia. Two patients ran high temperature for 39 and 45 days.

#### *Puerperal Cases*

1—Admitted from house service—11 cases. Seven of these patients were admitted in labor and had had some sort of manipulations on the outside. The mode of delivery included one Caesarean section and two manual extractions of the placenta. The complications included lobar pneumonia, phlegmasia and septic endocervicitis. Eight of the cases ran a low temperature for several days which then disappeared without any local or general manifestations, and which was evidently due to a mild infection with attenuated bacteria, probably limited to the endometrium.

2—Admitted from outside—91 cases. Thirty-seven patients had had one or more chills, in 22 cases complicated by severe pain, and 8 were admitted with sharp

hemorrhage. Three had had one or more convulsions, 5 were admitted comatose, and 15 had lochia of a very foul character. That is, 72 of the 91, 79 per cent, had definite symptoms of some sort of infection. In 67 cases the temperature was over 100.5, and in 29 cases it ranged from 104 to 107. Twenty had been repeatedly examined, 22 had been delivered by forceps, 3 by version and one by craniotomy, and in 3 cases the placenta had been extracted manually. One patient had been unconscious since the onset of labor and delivery had been effected instrumentally while she was in that condition. One patient gave a history of a tub bath and coitus in the first stage. In one case, verified by the hospital scales, the baby weighed 13 pounds. Seven children were stillborn and there were 7 positive Wassermans. The white count, as was to be expected in infections of such severity, was frequently high, in one case reaching 51,500. In 6 cases the hemoglobin was below 50. Seven urinalyses showed albumin ranging from 5 to 50 per cent. Blood cultures were positive in 9 cases, staphylococcus in 7 and streptococcus in 2. The intra-uterine cultures were positive in 6 cases, including streptococcus, gonococcus and 2 mixed infections. The purely obstetrical complications included, besides 28 cases of septicemia, sub-involution, infected tears, cellulitis, thrombophlebitis, septic endocervicitis and endometritis, phlegmasia, salpingitis, pyosalpinx, psychosis, terminal broncho-pneumonia, dislocated symphysis (this patient delivered a 13 pound child), intraligamentary abscess, parametritis, broad ligament tears, pyometra, post-partum hemorrhage, and breast abscesses (staphylococcus). It is interesting to note that this group contains a large number of eclampsia cases, which serves to call attention again to the increased susceptibility of eclamptic women to infection, partly owing to lowered resistance and partly owing to the radical methods of delivery so often employed. Non-obstetrical complications included mitral stenosis, fibroids, acute arthritis, toxic multiple neuritis, diarrhea, hookworm (2 cases), tuberculosis, cystitis, pyelitis, pleurisy, osteomyelitis (staphylococcus, colon bacillus and gonococcus), bronchitis and malaria. Two patients ran high temperature for 40 days, and 9 from 50 to 75 days. The mortality was 11, 12.1 per cent. Four were admitted moribund and died within 24 hours, giving a corrected mortality of 6.8 per cent. **Four deaths were due to sep-**

ticemia, complicated by lobar pneumonia (2 cases), acute anemia, and 3 postpartum hemorrhages in the same patient. Five patients were admitted comatose and died within a few hours or days, in the majority of cases from acute nephritis or eclampsia. The two other deaths were due to puerperal psychosis of the infectious type.

#### *Incidental Complications of Pregnancy*

1—Pre-eclamptic toxemia—11 cases. These were mainly neglected cases, the blood pressures ranging from 190 to 270 and the albumin from 8 to 50 per cent. One patient had temperature 107 on admission. One was admitted in labor 2 went into labor spontaneously, and upon other indications or after the routine conservative treatment had failed to secure results, labor was induced in the remaining cases by packs and catheters. Eight children were stillborn and one was macerated. The complications in this series were unusually severe and included placenta previa, 2 premature separations of the placenta, one case of chronic nephritis and one of hookworm. The mortality was 2, 22.2 per cent; one patient was admitted moribund and died 6 hours later, giving a corrected mortality of 11.1 per cent. The other death was due to broncho-pneumonia following placenta previa.

2—Vomiting of pregnancy—32 cases. As this series of cases has recently been reported in the *Journal* in some detail by Dr. Hilliard E. Miller (May, 1924), I shall not go into them again, simply stating that they gave the most uniformly unsatisfactory results we have to record. The gross mortality was 6, 18.8 per cent, and the corrected mortality 15.6 per cent. I should like to point out again that in many of these cases had therapeutic abortion been permitted at all, or permitted earlier, the outcome might have been different, but the patients, because of religious scruples, rejected the proposal to empty the uterus, and the delay should be charged to that fact and not laid at the door of the staff.

3—Placenta previa—7 cases. Most of these patients were admitted after outside manipulations and after the loss of large quantities of blood. They were all delivered by packs or bags followed by version, except one case on whom Caesarean section was done; this was the only case in which the child was born alive. The complications included thrombophlebitis, psychosis, and one case of septicemia. This patient's temperature ranged to 105 and

was not normal until the sixty-second day. Two patients died, a mortality of 28.6 per cent. One died suddenly an hour after version was done, and the other had a psychosis of the infectious type. It might well be pointed out here that the mortality of placenta previa will never be materially reduced until it is generally appreciated that the condition is one of such gravity that immediate termination of the pregnancy when once the diagnosis is established is the only conservative course, and that the proper place for treatment is the hospital and not the home.

4—Premature separation of the placenta—2 cases. Both patients were delivered by version and extraction, one baby being still-born and the other dying on the eighth day. One of the patients had a positive Wasserman. Both were admitted with high temperature, 102, and 105; the latter developed septicemia, with bacillus pyocyaneus the infecting organism. The mortality was 0.

5—Ectopics—6 cases. All were transferred to the surgical service, where the diagnosis was confirmed on operation. The mortality was 0.

6—Hydatiform mole—4 cases. All were admitted with severe hemorrhage and temperature from 102 to 104. One patient apparently had pernicious vomiting also, and a hemoglobin of 40. All were treated by curettage, followed by transfusion in the case of anemia. The mortality was 0. Three of these patients have been followed up from 2 to 4 years, and have had no after effects.

7—Kidney complications—12 cases. In one case of pyelitis the disease was pre-existent. The routine measures were employed, kidney lavage being necessary in 3 instances. One case of pyelonephrosis ran high temperature for 55 days. The mortality was 0.

8—Displacements—4 cases. Two were admitted with symptoms of threatened abortion and 2 with incarcerated pregnancies, in one case accompanied by acute retention of urine and temperature 104. All were treated by reposition and the pessary. One of the patients had typhoid fever at the time of admission, and aborted at 5 months at which time a lateral placenta previa was diagnosed.

9—Minor complications included 2 cases of gonorrhoeal vaginitis and one of pruritis. In all there were 85 cases in this series with a gross mortality of 10, 11.9 per cent, and a corrected mortality of 9, 10.6 per cent.

### *Accidental Complications of Pregnancy*

There were 45 cases in this group, including ptomaine poisoning (1, positive Wasserman); carbuncles (1); breast abscess (1); appendicitis (3); cholecystitis (1); tuberculosis (2, abortion advised and refused); hookworm (1, positive Wasserman, hemoglobin 50); femoral hernia (1); chronic nephritis (2, one positive Wasserman, one stillbirth at 8 months); cystitis (9, one positive Wasserman); otitis media (1); chronic cardiac valvular disease (1, complicated by mitral stenosis, renal disease and tuberculosis; died during induction of labor); 17 other cases admitted for various minor symptoms such as indigestion, constipation, etc. The mortality was one, or 2.2 per cent.

In every instance the treatment was adapted to the condition as if it had occurred in the non-pregnant woman. None of the surgical complications were severe enough to demand operation, but it is our policy, as a general rule, to operate on the pregnant woman whenever her condition seems grave enough to justify it.

### *Summary*

There were 299 cases of abortion with a gross mortality of 4 and a corrected mortality of 3, or 1 per cent; 25 premature labors, with a mortality of 1 or 4 per cent; 102 infected puerperal cases with a gross mortality of 11 and a corrected mortality of 7, or 6.8 per cent; 85 incidental complications of pregnancy, with a gross mortality of 10 and a corrected mortality of 9, or 10.6 per cent; and 45 accidental complications, with a mortality of 1 or 2.2 per cent. In all, exclusive of rest cases, 556 cases were admitted to the ward during the three year period, with a gross mortality of 27 and a corrected mortality of 21, or 3.8 per cent. Four hundred twenty-six of these cases were either postabortal or postpartal, and the corrected mortality in this series was 11, or 2.6 per cent.

### *Conclusions*

1—These figures are naturally higher than they would be in a well conducted private practice or in a private hospital, but they are extremely low for a large public hospital, where the patients are frequently admitted after meddlesome interference and ill-judged maneuvers by ignorant and dirty midwives and careless practitioners, and often in extremis. Certainly they are materially lower than the

10 to 15 per cent mortality which was the rule under the old radical treatment.

2—They illustrate very well the value of intelligent pre-natal care and the necessity of educating the mass of the people to it. Particularly in the toxemic and placenta previa cases neglected patients furnished the largest part of the mortality.

3—The figures also show the need for further education of midwives and even physicians. They need to be taught the simple principles of asepsis, and it cannot be emphasized to them too often that intra-uterine manipulations are without their province and that the place for operative procedures is the hospital.

4—Such a ward as this is not only of value in that it makes possible a correlated treatment of obstetrical complications, so to speak, but it is of inestimable value as a teaching center, as it permits the study of a wide range of obstetrical complications which might not be met with in years of individual practice, with every facility for clinical and laboratory investigation, as well as the supervision of an organized staff of specialists in this particular field.

## NERVOUSNESS

CLARENCE P. MAY, M.D.,

NEW ORLEANS

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Psychology deals with the individual's responses and relations to his surroundings and its object is the interpretation of the expressions of human behavior. Academic psychology is concerned with the examination of the course of thinking and medical psychology examines thought effects and other factors comprising the entire mental situation. Psychological investigation is of inestimable value and has given tremendous impetus to the study of mental disease.

To each person there are two considerations of vast importance; first self and second everything else, environment or reality to which he reacts physically with respect to such things as food, wearing apparel, climate, injury and disease and mentally by adjustment to social customs and situations both agreeable and disagreeable. Mental hygiene is preventive medicine in so far as it applies to psychological manifestations and its application is

directed to the initiation and maintenance of correct habits and adequate, effective individualistic adaptation and accommodation.

In the sequence of biological development the human mechanism is occupied with the necessity of functioning to achieve various results and the periods, during which such specialized endeavor is accentuated, are referred to as levels. For example, in early life growth is particularly stressed and the epoch is termed the physiological level. Later arises the necessity for more extensive and precise co-ordination of complex bodily activities and this is effected chiefly by the nervous system and the level of the central nervous system is reached. The psychic level is that of which thinking, ideation and other intellectual faculties are the type of expression. And at the social level, the reactions and manifestations of the psychic or psychological level acquire social values. The various levels are, of course, not distinctly delimited or separately represented in epochal limitations.

Inasmuch as environment is reality, there is no complete, safe or satisfactory escape from it and the establishment and preservation of an enduring, harmonious relationship is a prerequisite to one's wellbeing and best interests. Failure at any level is exhibited in alteration of physical and mental functions; default at the psychic or social levels implies faulty adjustment and the display of the reactions and responses, dependent thereon, is largely the condition to which we apply the term nervousness.

Therefore, it can be readily appreciated that nervousness is not a separate and distinct disease entity with clearly defined symptoms and easily elicited causes in each instance or a uniformly outlined course. It is not, in itself, disease of the brain or body; nor is it exhaustion, poisoning, fatigue or weakness of the nerves; but it is a type of reaction to physical or mental maladjustment, subtle, extensive, far-reaching and often disastrous in its effects, though almost invariably preventable and curable.

Persons, mentally or physically unfit, are unable adequately and effectively to respond to the exigencies of their environment and in dealing with nervousness we are confronted with individuals who are inadequate and inefficient and whose problems are rather distinctly personal. In supporting this theory one risks the implication of attributing nervousness to sel-

fish motives; selfishness is quite a common human trait, the origin of which is found in the fundamental and controlling group of desires related to the instinct, self-preservation, which implies keeping that which we acquire to enlarge, enrich, protect and preserve the self.

The causes of nervousness are infinite in number and variety. Those of prenatal or congenital origin are disclosed with difficulty and may not deserve the designation, hereditary; Dr. Oliver Wendell Holmes' Elsie Venner may serve as an illustration. Post-natal or acquired causes include such mechanical defects as tight clothing, faulty posture and deformities as flat-feet, bow-legs and knock-knees. Physiological causes are unhygienic conditions as defective ventilation, lack of proper food, sleep, rest recreation; puberty, menstruation, menopause, senescence. The home and family is to be seriously considered and often has much to do with early impressions and experiences, habit formation, discipline and training. Also to be included are structural disease, injury or malformation of the nervous system; poisons as alcohol, lead, arsenic; disease as syphilis and arteriosclerosis which may interfere with the proper distribution of blood to the tissues; injuries sustained during birth and later head injuries; hydrocephalus and microcephalus. Also producing effects are such constitutional diseases as pulmonary tuberculosis, heart and kidney conditions and altered states of the glands, pituitary, thyroid, thymus, adrenals and gonads. Stimulants and drugs as alcohol, tea and coffee, opium and cocaine are believed to play a very important role as causes; however, it is generally and perhaps correctly thought that the necessity for stimulants and drugs is created by reason of the individual's apparent need, in many instances, rather than to regard them as being responsible for nervousness. Injury or traumatism of the body or nervous system is to be given credit as a cause.

It would seem quite probable that practically all of these causes act largely in a physical manner but, at the same time, they must of necessity produce effects in the mental sphere as well. It is admitted that every physical change, experience or stimulus is represented in concomitant mental impressions and reactions and it is also held that the reverse is true, as evidence of which is the blushing of shame, the blanch-

ing of terror and the increased heart action and respiration accompanying fear.

Then there are influences which act more especially in the psychic or mental sphere so-called psychogenic or psychic factors. Included here are the reactions to fundamental instinctive tendencies and emotional states and conflicts. Also self and race preservation urges, sex urges, maternal instincts. The effects of fear, anger, disgust, jealousy, love, hate; the desire for power, freedom, security, happiness, adventure, change, companionship, wealth. In other words, our wishes, desires, cravings and yearnings on the one hand and our capacity to achieve and maintain them on the other.

Impairment or disease either of structure or function lowers the threshold and lessens the individual's protective and repressive powers and offers favorable soil for the development and progress of mental and nervous ailments. In the state of lowered resistance the normal or customary inhibitions are released; and ideas, thoughts, desires truly expressive of the real self, and which were previously controlled or repressed, arise and to this is attributed those unusual, peculiar or irrational exhibitions of personality alteration so often observed in those who are mentally distressed.

The seemingly amazing number of manifestations of nervousness are limited in variety only by the limit of one's knowledge, experience and ability to produce them by efforts of the will. Mental functioning is invariably accompanied by certain conditions of consciousness or awareness, termed affects or feeling tones both pleasant or unpleasant, pleasurable or painful, agreeable or disagreeable and affects are expressed in emotions. An emotion is an inseparable part of its instinct and an instinct depends on its emotion for expression. An instinct is a tendency to react in a certain predetermined manner to specific circumstances. A passion is an intense emotion of relatively brief duration as terror, anger, revenge, triumph. A mood is a moderate emotion of longer duration as optimism, pessimism, contentment, despair, despondency. When a mood continues, dominating one's personality, it becomes a temperament. That bodily and mental processes are closely interrelated and inseparable is undeniable.

Manifestations or features characterized as symptoms of nervousness are irritability, emotional excess as too ready excitement, depression, joy, anger tears and too



easy mental and physical fatigue with extravagant expression of feelings over trifles; indecision and lack of ability to concentrate or to think; irrational fears and unjustifiable worry; oversensitiveness to light, sound and the opinions of others; tendencies to intensiveness, hurry and rush. Evidence of increased nervous tension as feelings of stress, strain, anxiety, uneasiness, panickiness, discouragement, loss of self-confidence with numerous seemingly uncontrollable and conflicting thoughts. Dizziness, headaches, fidgetiness, jumpiness, jerkings with useless energy wasting body movements, twitchings, wringing of hands, nail picking and biting, finger and lip sucking, trembling. Loss or disturbance of sleep is frequent as are ideas of uncertainty, incapacity, imperfection, inferiority, helplessness, incompleteness, strangeness, impulsiveness, impatience; personal and spatial disorientation. And not infrequently the appearance of such exhibitions of illness is marked by more or less definite personality alteration and the affected individual develops excessive and morbid concern regarding his physical and mental health. The self is threatened with annihilation and the consequent emotional fear response is a frantic effort at self-preservation regardless of cost even to others; and attendant is the appearance of uncontrolled selfishness, self-pity, craving for sympathy, irresponsibility; reliance on the soothing and calming effects of stimulants or narcotics is often resorted to and social parasitism results.

Fortunately, the problems presented seldom fail to offer the prospect of satisfactory prevention and complete recovery for we are often dealing with material which in itself is sound but has simply been improperly and unwisely directed and managed.

Determination of the nature and extent of a malady is the domain of diagnosis and one's skill in this field is dependent on his ability to elicit and interpret the manifestations and to assign to each its relative and collective worth in the total evaluation. Imperative is the necessity for intimate acquaintance with normal and abnormal psychology, human behavior, ethics and thorough familiarity, with general medical science. While brilliant diagnostic exhibitions are not required, the importance of accurate diagnosis cannot be overemphasized, not alone for statistical purposes but because it depends on the application of fundamentally sound and correct scienti-

fic reasoning and precise, painstaking methods of observation and investigation and unflinching vigilance to the end that successful preventive and restorative measures can be instituted.

The profound importance of preventive measures is obvious; it is essential that elemental causative factors be understood and efficient, intelligent and persistent efforts be directed to their eradication or modification.

Prenatal causes require, for their elimination, education, care and protection of prospective mothers. In the postnatal group, parental enlightenment and correction of physical ailments with improvement of hygienic and environmental conditions is essential; food, rest, work, play, habits and disciplinary measures demand attention. Structural disease of the nervous system and body as a whole should be subjected to early, rigid and intelligent study and suitable treatment instituted. The use of stimulants and drugs must be summarily dealt with. Injuries, and especially head injuries, are to be subjected to most careful scrutiny before being ignored or considered as trivial.

It is to be remembered that instincts depend on emotions for expression. Failure of proper growth and development, persistence of infantile habits and behavior or the onset of any peculiarity or character alteration necessitates a carefully explained, calmly conducted diligent search and investigation. Children possess few or no preconceived ideas or correlated experiences and they acquire much knowledge by suggestion and imitation and the origin or basis of many of their oddities may be revealed by a careful examination and observation of other members of the family. Emotions exert a profound influence over energy production and distribution and it is of the utmost importance that they be understood, fully explained and properly guided and directed and not resisted, evaded or side-stepped. Any conviction on the part of the mind is very quickly expressed in the physical frame.

Efficiency of thought and action is to be striven for. Effort should be expended in the development of the power of concentration and singleness or unity of purpose. We should encourage habits of relevant decisiveness and an altruistic attitude toward the opinions, decisions and desires of others. Rush and hurry is undesirable and unnecessary if one plans in good season,

wisely and faithfully executes the designs. To be avoided is the cycle of anxiety, inefficiency and worry. Essential is the maintenance of a proper ratio of work, play, exercise, rest, diversion and recreation. Best set aside are the qualms of a too strict conscience; no one is right always and we must take some chance of being wrong.

Cultivate the habit of reaching decisions through the application of judgment, reason, experience, imagination and when decision is reached abide by it or act promptly. Learn to regard things as they are rather than as you wish they were and to accept them at their true value. Imagination, when controlled and coupled with experience, becomes a source of knowledge. Endeavor to rely on positive autosuggestion instead of upon the negative variety. We each have a part to play in life; we should study and attempt to understand it and play it with faith, courage, grace and unswerving integrity, without sham or pretense. Strive to avoid useless sorrow, and when your best and sincere efforts have been put forth, acquiesce intelligently and patiently in the inevitable.

Successful treatment of nervousness exacts thorough understanding, removal or modification of the cause and elucidation of the nature of the disorder and re-education. "As man began to think he came to realize he could best get along when he understood, not only those things about him but himself, his short-comings and superiorities." Always it is the things we do not understand which trouble us and the great significance of thorough understanding cannot be overestimated. When causes are irremediable or unalterable, appropriate treatment is to be directed to conditions with which one is confronted. Mysterious or metaphysical influences, cults, fads, faith cures possess no intrinsic or specific value and are not to be relied upon. Since there is seldom a single or definite cause of nervousness it is not to be thought that a special or infallible treatment is available or applicable in each case. And in administering to the relief of symptoms it is to be borne in mind that they are merely the outward aspects of a disorder and not the disorder itself and this is especially true of complexes and their manifestations. Therefore, while the disappearance of symptoms may indicate improvement it does not necessarily denote recovery and symptomatic treatment is of value but often of only temporary avail.

Generalities and platitudes are of little worth. The keynote of effectual prevention and treatment of nervousness is persistent, calm, searching study; unflinching, specific individualization and abundant, patient, rational explanation. The belief, that it is difficult to secure the confidence of a nervous person, is incorrect. On the contrary, he is decidedly susceptible but is unwilling to display confidence in anyone who has not gained it. He is sensitive to kindly treatment and quite ready to confide in one who can demonstrate a measure of understanding and interest in his fate.

Inevitably, in an art and science which is broadening and developing as rapidly as neuropsychiatry, extremism and radicalism are certain to appear. Radical and extreme tendencies, views and practices should be scrutinized with the utmost caution and definite, reliable proof of the real value and worth of all theories and treatments should be insisted upon before acceptance and usage is permitted.

"Kindliness and patience are the rays that dispel the fog of prejudice and suspicion. They will remove misunderstanding where argument would merely confuse the issue." After all, as Wells remarks; "the only true measure of success is the ratio between what we might have been and what we might have done, on the one hand, and the thing we have made of ourselves, on the other."

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#### SOME OTHER ETIOLOGICAL FACTORS IN ARTHRITIS\*

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I believe you will agree with me that the importance of arthritis from a medical, social and economic stand-point has not been, and is not now, duly appreciated. It is not only one of the oldest known diseases, as proven by evidences found on human remains of the stone age, and known as the disease par excellence of the ancient Egyptians, but it is also one disease in which the least advance has been made towards a knowledge of the underlying pathological disturbances.

It is true that the doctrine of focal infection is not new, for over 100 years ago Benjamin Rush devoted a whole page to infection around the teeth, and in 1892

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\*Read before the Mississippi State Medical Association, Jackson, May 13-14, 1924.

William Hunter thought that pernicious anemia was probably caused by some infection about the mouth and teeth, but until eighteen years ago when the attention of the Medical profession was called (by Goldthwaite) to the relation of focal infection there had been little or no advance in the determination of the etiological factors of this symptom complex. Since that time the pendulum has swung far over into the extreme relative to teeth and tonsillar foci and many have been forced to wear artificial teeth, perhaps unnecessarily. We are happy to believe, however, that the pendulum has about ceased its extreme swinging and has more nearly reached an equilibrium. The teeth and tonsils have proven to be the greatest offenders, and the foci found there are never to be overlooked. Their importance is being realized by the medical profession almost to the man today, and I do not wish to discourage any effort to locate the foci here, but rather to encourage the thorough exploitation of both as possible foci of infection which may be the underlying cause and source from which metastasis may start. But as the title of my paper indicates there are other etiological factors which must not be overlooked, and which deserve the attention and consideration of all men who practice the art of medicine. It will be impossible to enter into a detailed discussion of each and every etiological factor mentioned, but I hope by mentioning them, to stimulate you to read and study your cases with these in view, as possible foci besides the teeth and tonsils.

My principal idea in discussing this subject today is to call attention to the fact that bacteria are not respecters of persons, nor are they respecters of any organ of the human system, hence it behooves us in treating a case of arthritis to dig deep into the etiology of the case.

There has been a great deal of adverse criticism of exponents of focal infection and sometimes justly so, because we are often too satisfied to stop when we find one foci. Frequently we will have a secondary metastatic involvement of some distant organ or tissue, and the arthritis developing from infection derived from this source. For instance, in a series of cases, it was found that the seminal vesicles were involved in some cases where the primary focus was in the tonsillar tissue. Piecemeal diagnosis is to be warned against, if we would get the best of results.

A review of some of the literature on this subject is very enlightening and it

opens up a wide field for study. The accessory sinuses of the head, the appendix, the gall bladder, the cervix, the gastrointestinal tract, the genito-urinary tract, the exposure to wet and cold, influenza, tuberculosis, pneumonia, typhoid fever, the acute febrile diseases, and skin diseases, in fact almost any tissue which is capable of harboring a chronic infection, in my mind, would be considered a factor to be considered in the etiology of arthritis. From the bacteriological angle we look upon the streptococcus hemolyticus and streptococcus viridans as the predominating causative organisms, though by some it is alleged that yeast fungus growths and also the endameba buccalis may cause arthritis. The colon bacillus may be harbored in the bladder, and by the causation of a low grade inflammation produce arthritis.

Poynton & Paine in 1901 presented quite a detailed evidence in favor of their microorganism as has Rosenow more recently done for his. They found the diplococcus in the blood, pericardial fluid, endocardial lesions, nodules, heart wall and throats, and when rabbits were inoculated, produced arthritis, synovitis, pericarditis, etc.

Rosenow, corroborated by Billings and Barker and Bloomfield, held that in rheumatic fever there is a definite infecting agent and streptococcus which is extremely susceptible to environment and may under changed cultural conditions vary its characteristics as to Morphology, virulence and disease producing ability. Achelma, Singer Lewis and Lungeope have all produced arthritis in rabbits by injecting the streptococcus isolated in a case of endocarditis, arthritis or chorea. However the researches of these men have not been fully confirmed and Reisman has argued against the streptococcus as a primary cause, but suggests that it may serve as a secondary invader as it often does following infection of influenza.

Irons in *Journal A. M. A.* June 30th, 1923, states that the general clinical conception is that all metastatic lesions not preceded by one of the recognized bacterial-infections, enter the body from some pre-existing focus. It is consequently assumed that if the search is thorough and extensive enough a primary lesion may be found and removed.

Irons also mentions three less frequently considered portals of entry of recurring infections.

1st—Mucous membrane of upper respiratory tract.

2nd—Tissue about the hila of lungs.

3rd—Intestinal tract.

The experiments of Thiele and Emberton show that general infection from the buccal mucous membrane occurs in guinea pigs fed with virulent bacteria, provided the food is coarse enough to produce minor lesions of the mouth.

Enlargement of regional lymph nodes is frequently evidence of infection from buccal and pharyngeal mucous membrane.

Moenich in *Journal of Laboratory and Clinical Medicine*, February, 1924, has a good article on the relationship of chronic endocervicitis to focal infection, with special reference to chronic arthritis, and cites a number of cases bearing out the statement that a chronic endocervicitis may harbor an infection which may be a focus for the metastatic involvement of joints and other tissues.

She chose 12 patients with sub-acute or definitely progressing chronic arthritis, in whom other foci of infection had been eliminated, but whose symptoms bore evidence of the continued activity of a focus of infection within the body. A definite increase in specificity for joint tissues was apparent in animals inoculated from strains of streptococcus isolated from this group as compared to that of streptococcus isolated from the cervix in unselected cases. Such tendency to joint localization in the former group was retained over three and four animal passages."

And in conclusion of her paper she sums up as follows:

1st—The anatomic and pathologic facts reviewed, point to the cervix uteri to act as chronic foci.

2nd—Bacteriologic and animal experiments indicate the special roll played by the streptococci.

3rd—Evidence is presented to show the affinity of cervical streptococci for joint tissues.

4th—Marked percentage increase in joint localization in a series of selected cases of arthritis, suggests relationship with Rosenow's elective localization theory in focal infection, etc.

Walters, in the *Surgical Clinics of North America* for April, in discussing infectious arthritis from a surgical stand-point gives three cases of arthritis which were probably caused from infection from the cervix, and in discussion of these cases, he says that an abnormal cervix with its corrugations and folds of mucous membranes containing deep seated racemose glands with tortuous canals, the mouths of which are

easily plugged with mucous, affords harbors for the retention of bacteria.

Langstroth, some years ago established the fact that an infection of the cervix mucosa with pathogenic bacteria was common and that if it becomes a focus of infection, it is prone to cause systemic manifestations, as do foci found around teeth and tonsils and other structures.

Billings reports two cases of arthritis secondary to persistent foci of infection about the finger-nails.

Chronic otitis media and chronic mastoiditis, as well as some of the accessory sinuses of the head, must always be looked upon as sites of focal infection in relation to secondary local or systemic infections.

I have recently seen two interesting cases of arthritis caused by focus of chronic infection being in the prostate and seminal vessels, and we frequently see a typical gonorrhoeal arthritis.

Clinically we know that the removal of chronic local infections, provided we reach all such infected areas is followed by a freedom from recurrence of metastatic lesions in the joints, and the patient is greatly relieved in most instances, provided of course the mechanical damage from the inflammation of the joint is not too great. It seems to be the consensus of opinion that the streptococcus is the chief offending organism found in arthritis, although probably any other pathogenic organism might be capable of producing the same result. There are some who believe that unless the streptococci is in the focus found that there is some other focus causing the arthritis.

Lott in the *Surgical Clinics of North America* for February, 1924, outlines a diagnostic point between streptococcal infection and other types of infection of the tonsils, and says:

"It has been my experience that if we have a tonsillar focus predominantly streptococcal, we will get good results from tonsillectomy in such conditions as arthritis and neuritis, whereas in cases of a tonsillar focus predominantly showing staphylococcal and pyogenic organisms other than streptococci, we will not get a cure of the arthritis or the neuritis."

It is of course true that countless individuals present foci of the most marked type at various sites, and yet apparently enjoy good health. It is to be remembered that nature's means of meeting and combatting such agents of disease are pretty successful, and that foci of infection become the precipitating factors of arthritis

only when the barrier of defense is weakened or overcome.

I do not mean to say that all cases of arthritis bear a definite relationship to focal infection or vice versa. However, examination and treatment of a case of arthritis at whatever stage, are incomplete unless full consideration be given to the important relation of focal infection. In fact a careful and diligent search for every possible foci of infection forms the premise from which all further activities of determining the etiology of arthritis should start and let me again emphasize that in trying to determine the etiology of a case of arthritis, that your search must include nearly every part of the human body, and while we have not the time or inclination to go into some of the etiological factors mentioned, they are very important and deserve your consideration in dealing with a case of unknown etiology, and we should not stop when we find a bad tooth, or a bad tonsil, thinking that we have discovered the cause *sine quo non* of the Arthritis.

#### DISCUSSION

Dr. C. C. Hightower (Hattiesburg): This was a splendid paper, and it means this—that the doctor must get to work. Arthritis, or any other symptom about the body that we do not understand, means that there is some cause somewhere, and the practice of medicine in the future will not be an easy matter; it will be a hard job. When a patient comes in complaining it means that there is something wrong, and we no longer can give a dose of medicine and expect to get results. That is the reason that these off-colored practitioners get a hold, because we do not go to the bottom of the subject. We must examine the patient from head to foot, look at him from every standpoint, and then we can arrive at some definite conclusion as to relief. And that means long, hard work. We have the laboratory to fall back on, we have the nose and throat specialists, we have eye specialists, and we have the fluoroscope and the X-ray and all these various tests to be made, and it requires a lot of time and hard work to make these tests and arrive at proper conclusions.

I want to call attention to one thing the essayist brought out, and that is endocervicitis. Whenever a woman comes to me suffering from some obscure symptom one of the first things I think of is the cervix, and almost invariably when you exclude everything else and have a bad cervix you have the cause of the heart trouble. When the cervix is treated and cleaned up you will find the patient will rapidly improve.

Dr. J. G. Gardner (Columbia): We all know that there is a very definite etiological relationship between systemic disease and focal infections. That has been definitely established. Heretofore we described dyscrasias diseases and constitutional disorders which we now know are the result of focal infection in some part of the body. Focal infections are referred from the skin or from the mucous membrane—any part that is covered

with an epithelium. It can be the middle ear or the eye, the nasal sinuses, teeth, tonsils, any part of the intestinal tract, including the gall bladder, the appendix, sigmoid and rectum.

The statistics vary in different parts of the country, which we can readily understand. For instance, in Chicago at the Cook County Hospital they ran a series and found that the teeth were responsible for 75 per cent of the infections, tonsils 45 per cent, and lues 23 per cent. In our part of the country our observations are a little different from that. Our records show that teeth and tonsils are about the same. Our tonsils infections are higher than in the North because of the fact that we pay very much less attention to tonsillar infections here. In the majority of places in Mississippi school children are not examined and throats cleared up and adenoids removed. In the North in cold weather they may have more sinus infections and middle ear infections than we do down here. In the rural districts we do have less luetic infection than in the big cities.

Among the etiological factors involved in arthritis one considers not only the foci of infection, but another great factor is the resistance of the patient. When we see patients with bad teeth and tonsils that are not suffering from focal infection the reason is that they have good resistance—they have good primary resistance, which is the resistance of the tissue where the focus is located. They also have good secondary resistance, so that when the bacteria go through the surface tissue the secondary defense will pick them up—blood and circulatory fluids. Perhaps that is one thing that should be stressed more than it is,—that we must not only locate the infection, but also build up our patient's resistance.

We know that certain bacteria have a predilection for certain tissues. It has been recently shown that bacteria grown in kidney tissue have a predilection for kidney tissue; also that bacteria affecting the joints, grown in human joints, will affect other joints. This is the reason we assign for polyarthritis. If we have an acute, virulent bacterium and our resistance is low, we will have a virulent infection. If we have good resistance with less virulent bacteria the bacteria are either destroyed by the surface tissues and fluids or they lose their identity and we have no infection. With a virulent tonsil we will have a virulent arthritis; if we have a low-grade infection we have a low-grade arthritis.

The real etiological factors in arthritis are the virulence of the bacteria together with the resistance of the patient and the primary and secondary defense of the body, together with the existence of trauma.

Dr. H. M. Folkes (Biloxi). Doctor Hightower brought out an important point, and that is in the question of making the diagnosis, of taking the time and trouble to study the patient. That especially applies in focal infections. I take objection, however, to his thought that the failure to make these studies has been productive of the various cults. I remember fifteen years ago when I first went to Rochester I saw a large sign advertising a chiropractor—right there in the very heart of medicine.

The point I wish to emphasize is that you must not take the finding of one focus as being the definite factor in the causation of the particular attack. You have to keep on studying until you find the whole series. Along that line is the

thought that very few of our physicians ever take the trouble to make an examination of the prostate gland, and right there is one of the most prolific factors in the cause of arthritis. Just a short time ago I had a man come to me who had been through the hands of a half dozen different doctors in the South, and not a single man had made a rectal examination, and there was the sole seat of the trouble. In three weeks' time he was relieved of a condition he had had for several years.

The point I want to make is that where we fall down is in not applying the knowledge we have. I made that same statement many years ago relative to cancer—that the doctors did not take the trouble to examine and study their patients, and here I am making the same statement about another condition. This applies to all lines of medicine—where we fall down is that we do not take the time and trouble to go into our cases. Take that time and trouble, and charge them for it. There never was a place in the world where that is more fully illustrated than in this question of focal infection.

Dr. H. R. Hays (Jackson): The point was brought out by Doctor Gardner of the resistance of the patient. Very often syphilitic patients (25 per cent of syphilitic patients in Cook County Hospital) will go on with no symptoms at all until by reason of some kind of trauma their resistance is lowered and then their latent infection asserts itself. A patient will be treated for various other things, often before his real condition is discovered. Particularly do we see that in our sawmill work throughout the state—a patient will go along without any trouble at all, carrying this luetic infection and going on with his work until he gets some injury that lowers his resistance, and then his infection asserts itself. Very often we would find these patients before their accidents if we took a Wassermann of our patients and were more careful in the diagnosis of venereal disease particularly.

Dr. I. C. Knox (closing): The thing that strikes me relative to focal infections, and particularly arthritis, is the fact that we are too satisfied with a piecemeal diagnosis, and when we find one focus of infection we stop there. One bad tooth removed and a cure of arthritis expected is folly—or the tonsils removed. It may do it sometimes, but very often there is a secondary infection which we overlook and the patient will not get well from the removal of the primary focus alone. That was brought to my mind just recently in a case I saw that had had tonsils removed and still had arthritis. She did not get well in spite of the fact that she had had large tonsils removed. On examining for other trouble we found she was suffering from infection from a large cervix which harbored the bacteria causing the arthritis. In two other cases similar to that we did an amputation of the cervix with complete relief from the arthritis, when removal of teeth and tonsils had not been followed by relief. I have seen two cases of prostatitis which were undoubtedly secondary focal infections because the teeth had been removed.

But our chief aim is not to be satisfied by finding some definite focus of infection, but to go right on, and do not forget that bacteria are no respecters of person, nor organs, nor tissues of the body. They may be concealed anywhere and are one of the primary causes of arthritis and other troubles.

## FLUOROSCOPY IN MEDICAL DIAGNOSIS\*

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Fluoroscopy, after proper preparations have been made, is a simple and direct procedure, entailing less expense than pictures and less trouble to the operator. From the standpoint of the laymen it looks good. His idea, rather intuitive or from the old impression of the static machine is that the doctor, any doctor, can stand him up before the fluoroscope and tell all about him. From the physician's standpoint, the perfection of fluoroscopy to where it would be dependable would be a boon. Films costing like they do, make picture work expensive.

In the matter of equipment, the first essential is a dark room and a good screen. The eyes must be accustomed to the dark before the viewing is started. If there are other things to do in the light that demand attention, darkened spectacles may be worn to start the preparation of the eyes. Minutes spent in getting the eyes fit mean minutes saved in the examination, and this means less danger of burns. The application of the Bucky lead gird has been an aid to fluoroscopy as it has been to picture work. To get a brilliant view with it greater amperage is necessary so the time of observation must be shorter. Needless to say opaque gloves and any other protective apparel needed should be worn by the operator.

In every examination, as in every diagnostic procedure for that matter, be sure to distinguish the normal from the abnormal. The first thing is, have you a lesion. Putting a label on it is less fundamental.

The esophagus necessitates screen examination because with the rapid movement of the bolus, unless a complete impediment is present pictures are hard to get. Extrinsic causes displace the esophagus and intrinsic ones change the calibre, so it is necessary to remember its normal course and normal contractures. It starts out a little to the left, comes back, goes to the left as the left bronchus, comes around in front of the bronchus, comes around in front of the aorta, and turns quickly to the left at the cardia. The principal contractures are at the beginning and cardia, and there are others at the arch of the aorta,

\*Read before Mississippi State Medical Association, Jackson, May 13-14, 1924.

the left bronchus and the hiatus in the diaphragm.

The principal pathologic changes are spasms anywhere, but oftenest at the cardia; contractures from scarring and malignancy; and pressure from external causes as aneurysm, malignancy and inflammation. Dilatations occur above any contracture. Spasm of neurotic origin is usually higher up in the esophagus than organic. Cardiospasm always shows a wide dilation above it, wider than in the carcinoma. The contour of the lesion is sharply defined as distinguished from malignancy which is more gradual. Malignancy may occur anywhere but it is most frequent from the aortic arch down. New growths, inflammatory masses and aneurysm nearby are the usual causes of pressure from without. Diverticula of the esophagus are rare, but are discernable through fluoroscopy. In viewing an esophageal obstruction it is a good plan to try to make the already ingested opaque meal back up so as to get the lower contour. The irregular course of the lumen in new growth is distinctive. Non-contracting malignancies may be missed in the examination. The most frequent scarring is that after swallowing lye in children.

The stomach is the greatest field for X-ray diagnosis. Here fluoroscopy and picture work go hand in hand. The screen is necessary to note motility and mobility and to survey the organ in different positions. Having found a lesion or the suggestion of one, the patient is placed in the position where films will portray the lesion best. It is coming about that the direct portrayal of pathology is considered necessary for diagnosis. The idea used to be that changes in the behavior of the stomach were evidences of different abnormalities, but now it is the purpose of the examiner to show the lesion itself unmistakably. Cancer occurs most often near the pylorus but may occur anywhere. Ulcer occurs oftenest on or near the lesser curvature about the middle of the stomach, but it too, may occur anywhere.

The essential difference in the two is that the ulcer shows a loss of tissue, in cancer a gain. At the zone of the lesion in each case there may or may not be a muscle spasm. In cancer the lesion and spasm are broader than in ulcer. As would be presupposed the stiffening in the wall in cancer cuts down peristalsis at the point. Peristalsis in both conditions may be increased or decreased. Syphilis and linitis

plastica are the next most frequent lesions. Tuberculosis is very rare but must not be forgotten. Benign tumors do occur with such infrequency that assurance of their benignity better not be given on any less firm foundation than exploration. Operating on any benign tumor in the abdomen is like removing an innocent appendix, better a dozen innocent ones be removed, than a bad one be allowed to stay—if good faith exists in the matter.

Duodenal ulcer is the commonest lesion sought for and the most satisfactory to examine for, since Lewis Gregory Cole put forth his direct delineation so clearly. Here fluoroscopy is best used to place the patient where his lesion will outline best. The standing position is preferred by many, the horizontal by others. The lesion may be clearly visualized, it may not. With the fluoroscope one can detect presence or absence of changed peristalsis, and can place the patient in such position that his lesion will outline best in the films to be made. Ulcer usually shows as a loss of substance on the lesser curvature side of the duodenal cap with puckered mucosa next to it. Across the cap muscular contracture makes a band. Spasm from extrinsic causes or adhesions are the chief causes of error.

According to its nearness to the pylorus so will the tendency to blockade completely vary. Here is another source of error. Pylorospasm may or may not be caused by ulcer. One of the tightest I ever saw showed nothing more than a low grade cholecystitis to account for it. In duodenal spasm as in gastric the relaxing effect of belladonna is well worth trying.

To examine the colon the opaque enema under the screen is indispensable. Normally there is a little halt at the lower end of the descending colon and at the splenic flexure. Motion is rapid elsewhere. The principal lesion sought for is malignancy shown by a filling defect or obstruction. Tuberculosis may imitate it especially in the cecum. Ulcerative colitis shows spasm and occasionally direct evidence of the ulcer defect. Spasticity may occur in any colitis or from causes unexpected. Diverticula may be revealed or not. The inflammatory mass around a diverticulitis is best shown indirectly. Lesions in the rectum are best found by the proctoscope.

In the lungs the fluoroscope can be used to locate accurately tumor, abscess or effusion. Tuberculosis or other parenchymatous lesions are best located with films, as

the lesion is too indistinct sometimes for the screen.

The heart and aorta are best studied with fluoroscopy. The widening of the aortic shadow in aortitis and aneurysm is usually delineable, but often presents difficulties. Lymphsarcoma, Hodgkins, tubercular gland and carcinoma confuse, especially when the pulsation of a normal aorta can be transmitted to such a mass. An aneurysm in which firm clot has formed may not pulsate, and be mistaken for tumor. Sub-sternal goiter is best proven or disproven by the fluoroscope. The large vessels coming into a long thorax from above may confuse.

The water bag appearance of a pericardial effusion is known to all of us. The enlargement of the apex to the left in aortic insufficiency, and the total increase in the silhouette especially to the right in mitral disease, are the principal changes in heart shadow.

Gentleman, this is a technical article for men interested in general medicine. The high points only are touched, so that it may not be too tiresome. There may be much more to be said, but you did not come down here to be worn out with too much detail.

#### DISCUSSION

Dr. W. F. Henderson (Jackson): I am glad to hear the Doctor say in the last sentence that this paper is intended for the general practitioner. I daresay the majority of you here do not know much about the X-ray, which is not at all to your discredit. The important thing is to be able to arrive at a diagnosis of the pathology which exists, and you do not care whether it is done by a fluoroscope or radiography or what, so long as you arrive at the desired end.

There are three or four things which I want to discuss. Those of you who are in this work remember how enthusiastic we were in the early days of radiodiagnosis. I can remember quite well in my first year or two of X-ray work that I was not merely interested, I was over-enthusiastic; I was willing to overstate what we could do. I was anxious to help the clinician all I could, and I therefore made the mistake of taking a chance and stating sometimes something that I thought would hold his favor. When a patient comes to us we must remember that while the clinician's favor is to our advantage, and while we wish to do everything possible to retain it, we must not under any circumstances allow our desire to aid him outweigh our sense of proportion with regard to the best interests of the patient. What I want you to understand is that we must limit ourselves to what we are actually able to do.

Another point along this same line is that when you give a patient a Larium meal often the doctor who sent him expects you to tell at once whether it is ulcer, cancer, tuberculosis, or what not. Very obviously he is asking you to do what he cannot do himself with the abdo-

men open. He cannot palpate the patient and tell, and yet he expects you to look through the patient and differentiate between cancer and ulcer. We cannot always do that. Often the surgeon with the abdomen open is hard pressed to say whether it is ulcer or cancer. Of course, we are often able to state it is ulcer, or it is cancer, but do not press your radiologist too hard. Sometimes you will have to content yourself with the statement that a lesion exists in a certain location.

Ninety-five per cent of all gastric tumors are malignant, therefore when you say ulcer of the stomach you may be wrong five times out of one hundred. If your radiologist tells you it is malignant, and later he is proven to be wrong, do not hold it against him. It is far better to remove one ulcer thinking it to be cancer than to allow it to remain until it actually becomes such.

I should like to stress this fact, that no matter how capable your radiologist may be, no matter how wide his experience, no matter how cautious his judgment, no matter how keen his vision, the radiologist must not sit at the head of the table; always the clinician must be the helmsman and must guide and direct the case. The radiologist is the consultant and must keep that position. In this way only will the greatest good accrue to the patient.

Dr. C. C. Hightower (Hattiesburg): We use the fluoroscope a great deal, and if we use it regularly for routine examination we will discover many things we never knew before. Every doctor can have a fluoroscope in his office, and if he will train himself to use it he will derive great benefit from it. It is surprising to me that more doctors do not have fluoroscopes, because they can be obtained at a moderate price. We have discovered many things that we could not have found without a fluoroscope. For instance, we examined a man about 45, with vague symptoms—we did not know what was the matter with him. Put him under the fluoroscope and found he had an aneurysm of the aorta. He asked me to tell him what would be the outcome and I told him the facts—that he would not live very long. As far as we knew there was nothing to be done for him. Two months after that he dropped dead—I am sure from a ruptured aneurysm.

In regard to tuberculosis, we cannot always go to the expense of having pictures taken, and that is the advantage of the fluoroscope in the office. If you have an absolutely dark room you will soon learn by actual practice to recognize things you could not see at all at first. In tuberculosis we have been able to point out lesions by the fluoroscope alone, and in advanced cases we have been able to look at the patient and see as plainly as my hand the outline of the lesion in the lung and so be able to tell the patient the extent of the involvement and what he might expect. In gastrointestinal examination a man at first cannot see anything, but if you keep on looking you get to where you can see something after while.

Here is the great advantage of fluoroscopy. If you are not an expert you gradually become better and you can use this picture with other clinical knowledge. The doctor who knows the whole thing, I believe, is better able to arrive at a correct diagnosis than the one who just occasionally makes this examination of patients.



Make a routine examination of every patient by the fluoroscope and you will soon learn to read these pictures. I am not saying anything against the expert radiologist, but it is a great benefit to have a fluoroscope in your office.

AIR COOLED ULTRA VIOLET LIGHT THERAPY\*

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When the skin of the human body is exposed to the chemically active ultra violet energy, a number of objective and subjective reactions can be definitely determined.

First, after a latent period that may occupy from two to six hours, a reddening appears which is properly called an "actinic erythema." Actinic erythema may develop in varying degrees of intensity, depending upon the following factors:

1. Intensity of the ultra violet energy given off by the tube (as measured by the voltage at which the tube operates). The greater the voltage, the more vigorous the reaction.
2. Distance separating the tube from the skin. The reaction varies inversely as the square of the distance between the tube and the skin.
3. Susceptibility of the patient's skin according to (a) age (young people more susceptible); (b) sex; (female react sooner than male); (c) endocrine type (blondes burn more quickly than brunettes); (d) part of body exposed.
4. Time of exposure.

Generally, a pronounced actinic erythema should not be sought. As in X-ray therapy, so in ultra violet light therapy, the erythema that appears is a hindrance rather than an aid to the treatment. Therefore, a knowledge of the factors that go to produce an actinic erythema should be carefully memorized in order that treatments may be administered without precipitating a severely interfering reaction such as the erythema represents. A slight reddening is stimulative. A more intense reddening is regenerative. Excessive reddening is invariably accompanied by vesication, and is superficially destructive. Thus, there are three degrees of erythemas which may be designated:

- 1.—Stimulative erythema.
- 2.—Regenerative erythema.
- 3.—Destructive erythema.

Excepting in purely focal skin work, a destructive erythema is never employed.

General or Systemic Irradiation

Victor Air cooled lamp. Operating voltage, 70. Tube skin distance, 1 meter. Average exposure time, in seconds.

	Stimulative		Regenerative	
	Light (Blonde)	Dark (Brunettes)	Light (Blonde)	Dark (Brunette)
Infant . . . . .	15	20	30	40
Children . . . . .	20	30	40	60
Female adults . . .	50	60	90	120
Male adults . . . .	60	90	120	150

(From "Outline of Ultra Violet Therapy," Pacini).

The erythema persists for from eight to twenty hours and then usually assumes a bronze tint. If the erythema was regenerative or destructive in intensity, the bronze pigmentation is accompanied by a slight or marked exfoliation. The bronze pigmentation lasts a long time, from a few months to a few years, according to its intensity. Upon subsequent exposures to ultra violet radiation, a freshly pigmented skin surface is found to be about 1/2 to 1/4 as sensitive as a fresh, untreated skin surface. Therefore, each ultra violet exposure after the first, given on the same surface, must be proportionately increased in time to compensate for the tolerance established by the pigmentation. However, if ulcerated surfaces are being treated to stimulate epithelial covering, each subsequent ultra violet exposure must not be increased in time, since the protective pigmentation is necessarily absent and the newly formed granulations are too young to accept an increased amount of radiation.

An analysis of the blood in disease before and after exposure to ultra violet energy shows an increase in

1. calcium.
2. phosphorus.
3. iron.

Normal individuals show little or no change. The increase in calcium has been carefully and conclusively demonstrated by competent workers at Columbia University, Johns Hopkins University, Yale University

\*Read before the Louisiana State Medical Society, April 22-24, 1924.

and elsewhere; and upon this proved finding, many therapeutic uses for ultra violet radiation have become clinically important and popular.

A review of the calcium metabolism and its variations is an obviously excellent key to the scientific use of ultra violet.

Hamburger (1) observed that calcium salts stimulate the phagocytic effects of leucocytes. This may explain the increased opsonic index that follows exposure of the body to ultra violet energy. The opsonic index is increased generally for all pathogenic bacteria, and specifically for any one organism that may be infecting at the time. In every instance of lessened cellular resistance leading to easy infection of the body under any slight provocation, ultra violet energy is specifically indicated. In proportion at the resistance is raised, the calcium most usually becomes normal in amount.

Kastle, Healy and Buckner (2) have shown that calcium reduces anaphylactic reactions. Novak (3) studied hay fever, bronchial asthma and hyperesthetic rhinitis. He found that when any of these conditions are accompanied with calcium deficiency, and they very often are, general irradiations under ultra violet light with calcium lactate and thyroid by mouth, led to complete reduction of the anaphylaxis with disappearance of all symptoms. Angioneurotic edema, chronic urticaria, some cases of eczema and psoriasis and seborrheic dermatitis and likewise anaphylactic reactions; and are dispelled promptly by ultra violet treatment apparently through the correction of the calcium metabolism.

Pettibone (4) finds a marked decrease in blood calcium in protracted jaundice. Bradycardia and some of the mental and nervous symptoms are ascribed to the deficient calcium in icterus. Under ultra violet, the reduction of pigment toxicity and the clearing of the mental and nervous symptoms can probably be accounted for on the basis of the calcium increase induced.

It is definitely established that bone, joint and glandular tuberculosis are immensely benefited by ultra violet radiation. While less brilliant in its effects upon other forms of tuberculosis, ultra violet is nevertheless of much value in all the clinical varieties of tubercle infection.

Mayer (5) mentions excellent results in tubercular peritonitis, in which a rapid disappearance of peritoneal fluid is noted. Tubo-ovarian tuberculosis responds well.

Obviously, the treatment of fractures showing a delayed union should and does

furnish good results. Similarly, osteomalacia and demineralization of bone incident to disease or disuse, are benefited by the radiation.

The conditions showing faulty calcium metabolism, either insufficient element or inadequate fixation of the element, that have been successfully treated with ultra violet energy, include (6):

1. Anaphylactic reactions:
  - (a) Hay fever.
  - (b) Asthma.
  - (c) Eczema (occasionally) and other diseases of the skin.
  - (d) Angioneurotic edema.
  - (e) Certain gastro-intestinal disturbances.
2. Infantile tetany.
3. Rickets.
4. Diseases of bone:
  - (a) osteoporosis;
  - (b) achondroplasia;
  - (c) osteogenesis imperfecta;
  - (d) osteomalacia.
5. Fractures.
6. Tuberculosis:
  - (a) larynx,
  - (b) bone,
  - (c) gland,
  - (d) joint,
  - (e) peritoneal,
  - (f) intestinal,
  - (g) genito-urinary,
  - (h) skin,
  - (i) pulmonary.

Because of the influence on iron metabolism, the anemias of children, chlorosis and secondary anemia of adults respond promptly to the energy.

For reasons that are not yet clear, ultra violet radiation has been found to do good in these conditions:

1. *Internal medicine*—Dysentery, influenza, diseases of the liver, diseases of the glands of internal secretion, chronic peritonitis, mucous colitis.
2. *Surgery*—The treatment of infected wounds.
3. *Gynecology*—Amenorrhoea, Menorrhagia, Dysmenorrhoea, Ovarian disease.
4. *Skin*—Furunculosis, Herpes zoster, urticaria, lupus vulgaris, scrofuloderma, acne vulgaris, pruritus.

It is obvious that the greatest possibility for the clinical usefulness of this important radiation rests in the treatment of metabolic disorders. It must be remembered that the energy is very like the X-Ray in many of its physical qualities. In fact, it may be

regarded as an extremely soft X-Ray endowed with a tremendous capacity to do chemical work. It is pleasing and reasonably safe to use. The clinical results it furnishes are commendable to the point that ultra violet has undoubtedly won a therapeutic prestige in every way equal to the diagnostic prestige of its fellow energy, the X-Ray.

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## MORE RECENT PROGRESS IN OPHTHALMOLOGY\*

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Ophthalmic progress is taking two directions; the first leading to a better understanding of purely medical problems; the second leading to a better understanding of practical economic problems and of the patient as a human being and it is especially in this part of my subject that I wish to interest you.

I believe that the principal practical problem of organized medicine today is greater and more economical service to the public; not for the purpose of directly increasing the doctor's income but for the purpose of conserving health at a minimum expense of time and money by reducing, through a more thorough understanding of the physicians economic problems, the loss and waste with which medical practice is so generously burdened.

### Medical Meetings

Medical meetings are essentially intensive postgraduate courses; which we attend primarily for useful information that can be advantageously used on those who entrust their health in our care; and the time is not far distant when medical meetings will function as such and will devote a larger part of their attention to the discussion of recent progress in the various medical branches and the details of rendering greater practical service to the public; rather than to the reports of cases and subjects which interest the essayist, but which

often do not have much practical value to the majority of listeners and readers.

### Postgraduate Teaching

Postgraduate instruction is undergoing much the same evolution through which the undergraduate passed some twenty years ago. Definite schedules; the separate instructions of different grades of advancement; systematic didactic, laboratory, and clinical instruction given by trained members of an organized teaching institution and limited to the number of students that can be given the best instructions, and to those who are qualified, and really want to work; are fast replacing the type of postgraduate course in which any body did any thing at any time that fancy dictated, and in which the teacher's aim was a display of wisdom rather than of instruction on how to better serve the public.

### The Patient

Patients usually seek professional medical assistance because they believe something ails them, which very naturally they expect the physician to thoroughly understand, and if practical, to remedy.

This simple fundamental fact which has been so successfully taken advantage of by the newer cults, has in the past apparently been lost sight of at times by the regular medical profession. Our increased knowledge of the construction and function of the human body and its ailments, enables us to render the greatest possible service to the well and the sick. Fortunately, we are seeing the handwriting on the wall, and we are devoting much greater attention to the patient as a human being, rather than a case of this or that disease; we are more thoroughly studying the inter-relation of the several bodily functions; we are taking more interest in teaching the public the art of healthful living, physical and mental; and we are intelligently trying to give the public the best possible value for that portion of their income which is paid to us.

The time is not distant when (for future reference), our patients will routinely request a detailed report of our services.

As physicians, let us not forget that we can at best make nature's repair plant function as effectively as possible, and that in Ophthalmic practice at least, a goodly number of our patients would not seek our professional assistance if their bodily health, other than their eyes, was reasonably perfect. In the majority of slight refractive errors for example, the subjective symp-

\*Read before the Louisiana State Medical Society, Opelousas, April 22-24, 1924.

toms represent evidences of general fatigue, in which the focusing and fixing apparatus play a major or minor role, and it is just as important that the Ophthalmologist directly interest himself in minimizing excessive fatigue which often involves physical and mental hygienic errors of omission and commission, as in the prescription of medicine and glasses, which may be neither necessary nor useful when the circumstances, local or general, that have produced the increased fatigue, no longer exist.

If we of the medical profession, wish to retain public confidence, we must deserve that confidence by professional and financial square dealing. The Placebo and other forms of medical camouflage represent deception, which is more reprehensible in us than in those we condemn.

#### *Medical Economics*

The cash store and the Federal income tax are the greatest recent aides to the medical profession. The former has taught the public that in paying cash they should receive more value by not having to pay for those who do not pay. The latter has made physicians keep a record of their income and expense, which if studied, will enable them to render better service by minimize the loss, waste and extravagance for which the consumer always pays.

Do you know that the average physician realizes less than forty cents of every dollar that he earns? Services rendered, to the poor, through professional courtesy, and because of the expectation of publicity, represent at least fifteen per cent of his efforts which are not charged. Another fifteen per cent is charged but not collected. The average overhead cost including all attendant expense, of medical practice is more than thirty per cent, so that the earned dollar shrinks to a net forty cents. Going one step farther do you know that on the basis of six hours per day devoted to actually treating patients, with a three hundred day working year, of which twenty-five days are allowed for vacation or other absence that an average charge of one dollar per hour will produce a net income of less than one thousand dollars a year. In other words if you desire a net income of ten thousand dollars per year in medical practice, you must make your average time worth ten dollars per hour to the patient, who is the consumer, and from whom your fee must be earned.

Don't you think that every medical or-

ganization should have a committee on medical economics to help the physician in innumerable practical ways such as the maintenance of permanent clinical and financial records in the best, easiest and quickest way, etc. Data may be gathered on the various divisions of medical income and expense, thus you and I could more easily know how to increase our gross and net earnings to the highest practical point by improving the quantity and quality of our services and by minimizing expense, loss, and waste; how to easily determine whether in any given instance the grouping of a number of physicians in a hospital, office or diagnostic unit would be a practical success and how income and expense could be equitably distributed; and how to determine in a given instance whether increased expense, or assistance, would be of practical value and how to determine its use, value and earnings.

These are but a few of the many ways in which our medical organizations could and would help us if we were sufficiently interested and cared to break with some of the the traditions and mistakes of yesterday.

Whether you will or not, the days of Elijah, who was fed by the ravens, are over; as are also those of Robin Hood, who robbed the rich and occasionally gave to the poor.

#### *Optometry*

Refraction is fast slipping from the domain of medicine and only a much more aggressive policy on the part of the medical profession and Ophthalmologists in particular can retain it.

If refraction is lost to medicine, Ophthalmology, which is now one of the most poorly paid medical specialties, will cease to attract physicians, which means that the public will be practically deprived of the services of those who thoroughly understand both the eye and the rest of the human body and their ailments.

If we wish to retain refraction, we must interest ourselves in the public and give better and more economical optical service; we must supervise the dispensing of glasses in order to unify our responsibility to the patient; and we must enlist the help of the medical profession in withholding support of the optometrist and in an organized campaign to place the pertinent facts before the public.

Whether we supervise the dispensing of glasses by employing an optician, or mak-

ing the necessary measurements and have the lenses ground and frames assembled by an optician; or by sharing our responsibility for the public eye-sight only with those who meet our requirements of competency in the testing of eyes for glasses are minor matters. The important thing is that we make ourselves competent to shoulder the entire responsibility for the public's eye sight and that the public be given the best and most economical optical service. Commissions from the sale of glasses and other subterfuges are forms of petty graft for which the patient must pay most dearly, and have no place in our scheme of ophthalmic practice.

Practical refraction requires in the vast majority of cases an intimate knowledge, not only of the visual apparatus but of the entire human body; in other words to efficiently prescribe glasses usually necessitates an examination based on a thorough understanding of ailments of the eyes and ailments of the human being of which the eyes are a part. The knowledge we believe is, generally speaking, to be found only in those who have passed the accepted tests of medical fitness.

If Optometry can serve the public as well as, or better than, the medical profession through Ophthalmology; let us say so. If not, let us prove it, and through our representatives, give the public every possible opportunity of knowing who we are and for what we stand; because organized Optometry is presenting its virtues in the most favorable and most aggressive manner possible.

#### *Ophthalmic Classification*

Our classifications in ophthalmology are imperfect. We name similar conditions differently and very different conditions similarly. I believe that a system of classification and nomenclature based upon cause, as manifested by the characteristics of the tissue reactions, would simplify nomenclature and materially aid in the better understanding of processes, physiologic and pathologic. I know that there are many medical problems unsolved but the sooner we attack every case from the fundamental standpoint of cause and effect, as manifested in the reactions which take place, the sooner this number will be reduced.

Affections of the body are developmental and acquired, and of physical and chemical origin. Physical causes include mechanical force, heat, light, and electricity.

Chemical causes originate, outside or inside of the body; which are produced in the process of metabolism of one or more of the several organs, or by the products of organisms; bacteria, fungi, protozoa, metazoa, etc.

True it is that more than one cause can act at the same time and that we have not learned in many instances, the direct relation of cause and effect upon the various bodily tissues; but, I believe that the ocular tissues react somewhat differently to each of these causes and by a closer routine observation of the fundamental reactions of the tissues that we will ultimately identify cause by the characteristics of effect.

#### *Ophthalmic Diagnosis*

The greatest recent advance in Ophthalmic diagnosis is the adaptation of focal illumination, in the form of the slit light, to the Capski corneal microscope.

Although at present, clumsy, cumbersome and expensive; its use is helping to clarify our understanding of anterior ocular affections and in some instances to better determine progress, cause, and treatment.

With the present equipment at our disposal, the anterior ocular tissues can be practically studied with linear magnifications ranging from fifteen to one hundred; and with at least four forms of illumination, each having advantages and accentuating certain details.

These forms of illumination are essentially:

1. Focal refracted, in which a divergent or convergent beam, or an actual slit, is played upon the tissues, affording a rather accurate estimation of depth localization by means of the relation of a given point to the anterior and posterior surfaces which are seen as brilliantly illuminated rectangles.

2. Diffuse refracted, which roughly corresponds to ordinary daylight.

3. Focal reflected, in which the light is so angled that its reflection from the various ocular surfaces can be studied as ordinarily are the reflecting surfaces of lenses or mirrors.

4. Diffuse reflected, in which the light is reflected into the adjoining tissues, corresponding somewhat to transillumination.

In the cornea very small foreign bodies and rust spots can be identified; as can uveal involvement, through posterior surface opacities; and other finer tissue de-

tails in the epithelium, Bowman's membranes, Stroma, Descemet's membrane and endothelium; in developmental and acquired conditions, often affording clues to process and cause. Of more academic interest are the nervous and vascular systems.

In the anterior chamber, slight differences of depth (lens sub-luxation); diminished size of the filtration angle, (Glaucoma); and very slight opacities, which appear as dust in a dark room crossed by a beam of light, (Uveal involvement); have a practical value. Rather interesting, is the movement of opacities upward in the posterior portion and downward, nearest the cornea.

The finer changes of size, shape and color seen in developmental and acquired affections of the iris include diffuse and focal, retinal and uveal, pigment proliferation, dispersion and absorption; stromal infiltration, cicatrization, and atrophy; and vascularization, both in and on the iris. The careful study of lens-iris adhesions often affords information of immediate practical service in treatment.

Six reflecting surfaces and at least that number of zones can be observed both in the anterior and posterior lens.

These zones are:

- (a) Central or embryonic, which forms before birth.
- (b) Intermediate or infantile nuclear, which forms during the first few years of life.
- (c) Peripheral or adult nuclear which forms during the remainder of life.
- (d) Transitional or cortical, which is undergoing transformation into nucleus during life.
- (e) Sub-capsular which contains the newest formed lens fibers.
- (f) Capsular, covered by flat pavement cells.

The details of opacification as they involve these zones facilitate our understanding of the time of life when the opacity began and to a certain degree of its progress and the best method of treatment. We can thus determine in the majority of cases whether or not an opacity is developmental or acquired, of physical or chemical origin, and due to the products of metabolism with or without the effects of pathogenic organisms.

Among the developmental affections of the lens which can be identified are; remains of the tunica vasculosa lentis; anterior and posterior; the hyaloid artery

and attachments; the anterior more or less upright Y shaped suture; the posterior inverted Y shaped suture, punctate and linear deep cortical opacities, etc.

Post-traumatic opacities include; those with capsule rupture, concussion opacities which frequently begin in the posterior sub-capsular zone, and the anterior ring shaped opacity of Vossius, which corresponds with the pupil and comparatively rapidly disappears.

Senile cataracts are apparently due to multiple factors; developmental and acquired (metabolic and possibly physical, such as heat, light etc.). Depending upon the varying inter-relations of these factors, there are the different types of nuclear and cortical opacities.

Associated with intra-ocular disease especially of the uveal and retinal tracts, lens opacities are frequent. These are the "Complicated Cataracts" and are especially important because they frequently occur in eyes potentially sightless, in which the removal of the lens will not improve vision.

These opacities begin in the sub-capsular zone, most frequently posterior, early in their development are rosette shape and located near the axis. They are characterized by their high degree of reflectibility, their porous character and by their rapid advance usually forward.

I do not believe that one has the right to operate upon a cataract unless its type, development, traumatic, senile, complication as well as its shape or zone involvement are definitely understood.

In the anterior vitreous, congenital and acquired opacities can be differentiated, as can be those due to deposits, and those due to changes in the fundamental vitreous structure.

The red free light by which the color scheme of the fundus is changed from a pink, yellow, red to a green, yellow and black; enables us to determine more easily slight retinal caliber changes, hemorrhages, and certain changes in nerve structure, especially in the papular macular region.

#### *New Instrument*

I have perfected, and hope to soon have marketed at about one tenth the cost of corresponding instruments now on the market, a small portable combination ophthalmoscope, retinoscope, focal illuminator, slit light, operating lamp, and corneal microscope.

As a direct ophthalmoscope, the instru-

ment can be used with four light intensities, with or without reflexes, and with or without red absorbing light. In the examination of media, convergent or divergent light may be used just as any lens combination which can be changed from plus twenty-five Dioptre to minus twenty-five Dioptre, in units of one, five, ten, or twenty Dioptres, without passing through any intervening lenses.

As a retinoscope, the instrument may be used with slight divergent illumination which corresponds to the plain mirror, with more divergent illumination, corresponding with the concave mirror and with a double crossed light corresponding with the plain mirror each method having certain advantages.

As a focal illuminator, the instrument affords a wide range of illumination; convergent and divergent, including a small linear beam brightly focused, which we call the slit light; also a crossed, round flat light of varying size, adapted for operative work.

The widely divergent illumination can be used as a ruler of light to facilitate the determination of small differences of symmetry, while the more convergent illumination is better adapted for the measurement of smaller objects such as the palpebral opening, cornea, etc, and the still more convergent illumination is better adapted for the measurement of pupillary reactions etc., by illuminating the entire retina or a small part.

The corneal microscope affords magnifications ranging from ten to fifty, and will, I believe give the observer the same practical advantages obtained in the larger instruments now on the market.

### *Surgical Treatment*

The operation of Phakeoresis, or removal of the lens by suction obtained from a small electrically driven pump has been successful in the hands of certain European operators, especially in uncomplicated immature cortical senile cataracts; but whether or not it is adapted for our use remains to be seen.

The intra-capsular extraction of cataract especially with the Smith technique is apparently much less hazardous in India than in this country, probably due to both the lens and the individual being there exposed to a very hot climate and a very bright light.

The innumerable modifications of the

operative treatment of senile cataract which have been suggested, and which have been tried and discarded in the court of general usage, only serves to emphasize that to the present time the accepted combined extraction is for the vast majority, the best and simplest method of treatment in uncomplicated senile cataracts. There are styles in ophthalmic surgery as in dress, and in our effort to progress and do things differently, the pendulum of novelty swings from extreme to extreme occasionally obscures those procedures which have remained stationary through long usage.

Generally speaking, the Elliot operation seems to be the operation of choice in non-congestive glaucoma; and the sclero-iridectomy in the congestive form.

The anesthetic injections of the orbital apex in intra-ocular operations, as well as the injection of the peripheral facial nerve or the operation of canthotomy to prevent forcible contraction of the orbicularis, are most valuable adjuncts to intra-ocular surgery. We routinely inject about one-half cc. of a two per cent novocaine solution, with two drops of adrenalin, practically at the apex of the orbit with a two inch needle, entered at the lower temporal equator of the eye ball. This location is selected because of the absence of extra-ocular muscles and because the nasal branch of the fifth enters the orbit through the lower portion of the sphenoidal fissure. Usually within a moment, the pupil dilates, showing that, probably through the sympathetic dilator function indirectly that the intra-ocular portion of the fifth nerve has been anaesthetized.

Butyne as a local anesthetic in the conjunctival sac, apparently insensatizes the tissues, with the same intensity as cocain, does not destroy the epithelium as rapidly as the older drug.

### *Medical Treatment*

The use of nonspecific protein therapy is still experimental which means that we do not know its exact action, uses or dosage, although in gonorrhoeal ophthalmia it has become a part of our routine treatment. Even here I have seen, in apparently similar cases, marked improvement follow its use in one instance and no improvement in another.

In the treatment of dacryocystitis and trachoma the tendency appears toward non-surgical methods. With the possible exception of mercury and certain coal tar derivatives in staphylococcus and strepto-

coccus infections, optochin in pneumococcus, zinc in diplobacillus, and silver in gonococcus infections we have no conjunctival antiseptics of specific value. Borax, boric acid, potassium permanganate and the legion of other solutions which have been, and probably will be used in eyes as long as time lasts; are in the proper dilution non-irritating, and isotonic with the tears; but do not have and curative action except in the removal of secretion which may be chemically irritating. Aqueous solutions in the inflamed conjunctiva are diluted to at least one-twentieth of their original strength within five minutes, which means that even assuming a bacteriacidal action in normal strength, which is far from proven in most instances; homeopathic dilutions soon result which could not possibly have specific curative value.

Radium and X-Ray therapy are still experimental and generally reserved for inoperable cases.

Tuberculin therapy has been more widely adopted in ophthalmology than in other medical branches, possibly because the local reaction can be better studied and regulated in the eye than elsewhere. The objection to its use is in the general reaction that may unfavorably affect the patient's bodily health, and even life.

Light therapy affords a local without a general reaction and seems to offer certain advantages as an adjunct in the treatment of ocular tuberculosis.

Endocrinology has thus far been of greater value in the understanding of developmental and metabolic problems than as a direct means of specific medication. With the exception of the thyroid, the pancreas, adrenals, and the pituitary, the active principles of the ductless glands have not been isolated, which practically means that for the most part, specific endocrine therapy is of more value in the experimental laboratory than in the physician's everyday practice.

Unfortunately there is no medical treatment of cataract worth even a trial, which is mentioned, that the general physicians may prevent those who have been falsely advised from wasting their time and money and above all, of having their hopes of sight restoration, ultimately blasted by the truth.

#### *Conclusion*

My presentation of this subject has purposely been largely a discussion of the advances of today and tomorrow in ophthal-

mic practice, not because I undervalue purely scientific progress, but because I believe that more good will result from a frank and free discussion of everyday problems, rather than from the presentation of technical and obscure details in which most of you are not directly interested, and which you will have forgotten long before they can possibly be of use.

Honest and faithful service in medical practice is, and will always be rewarded by the comforts of life and sufficient of this world's goods to provide for us and ours when the shadows fall toward the east, if we will but devote a very small part of our efforts to the honest, practical simple and direct solution of the less scientific problems which ultimately mean professional and financial success or failure.

Whether or not you agree in my suggestions is a minor matter. Of importance is, that with the forward movement of the hand of time that we see the necessity of practical reforms in medical practice, both from the standpoint of the physician and the patient, and of greater importance is the necessity of your taking a real interest in their realization.

#### DISCUSSION

Dr. T. J. Dimitry (New Orleans): As an ophthalmologist I feel it behooves me to say something on Doctor Bahn's paper. I might state that it is a very valuable and attractive paper and one to which I listened with great advantage, and had I not heard his final words I would not have been able to say a word other than confirming his observations. His final remark is that cataract in its incipiency is incurable and is not to be benefited by treatment. I would like to ask, if cataracts come about simply, as the result of age? are they not produced by something other than age? If you will admit the latter, i. e., pathology, then I would say that incipient cataract can be benefited, may not be cured, may not have perfect vision restored, but at least the lens changes prevented from going further in its progress, and the patient may never become permanently blind.

Dr. Charles Bahn (closing): In reply to Doctor Dimitry's question, I appreciate his bringing out that question because it is in the minds of most ophthalmologists. Remember that cataracts are due to either developmental or acquired causes—to either physical causes, to the products of metabolism, or to the poison of the lens from poisons developed elsewhere in the body. Ordinary senile cataract, which I had in mind, is usually a combination of developmental causes and metabolic causes, and probably physical causes. I do not believe that any medicine we can give will affect our developmental defects. I do not think it will keep us from growing old, but if we are being poisoned daily that it will check the poison. To that extent it will have a beneficial effect upon the lens, but further than that I rather doubt.



THE TREATMENT OF VENEREAL  
DISEASES FROM THE STAND-  
POINT OF PREVENTION\*

RUSSELL A. HENNESSEY, M.D.,

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Since 1917, we have been awakened to the most dreadful of all scourges that has ever confronted humanity. The cloud of secrecy and the cloak of false modesty and prudery, beneath which venereal disease has been steadily ravaging the health of the nation, are fast disappearing in the light of the truth. Openly we have fought national menaces, such as bubonic plague, yellow fever and tuberculosis; now let us meet this national emergency with typical American spirit and by arming ourselves with facts and educational facilities.

The protection of the public health is an inherent responsibility of any government. Realizing this responsibility, the United States Government through the agency of the United States Public Health Service and its far reaching influences, is waging a relentless battle. Just as criminals are not allowed to rove at large and endanger the lives and property of citizens, so should those suffering from dangerous communicable diseases be prevented by the health department from coming in contact with those who are free from disease. Not alone from the standpoint of preserving or improving the national fiber, but for economic reasons as well, should such agencies receive the unstinted support of the medical profession and laity. Each state and individual taxpayer is paying heavily for the misdeeds of society. Not alone is the care of such cases important economically, but the loss to labor is an economic loss and everyone loses when there is an economic loss. Ignorance is largely the cause of the prevalence of venereal diseases. Fifty-five per cent of young America is infected with a venereal disease before the age of twenty-three. Two hundred and fifty thousand die each year from the effects of venereal diseases, as against one hundred sixty thousand from tuberculosis. Approximately one-fifth of all inmates of insane institutions are there because of syphilis; thirty per cent of all the blind in our institutions have been blinded by gonorrhoea; eighty per cent of all the operations upon the female generative organs are due to venereal diseases. With these

significant facts before us, the problem ceases to be a private affair.

—*Causes of the Prevalence and Increase in Venereal Diseases*

United States Public Health Service reports indicate that venereal diseases are not decreasing, but increasing in number. Removal of segregated vice or assignation houses has had no effect upon the sex desires of man or woman. The old-time prostitute has disappeared, but a new type has taken her place. The form has changed but the substance remains the same. In her stead have appeared an army of clandestines and amateurs, the most vicious because of ignorance, who bid fair to wreck the very foundation of society. The sex problem seems to laugh at man-made laws, for, though legislation has closed the old red-light districts, call houses and madame apartments have made their appearance in the very heart of our fashionable residential districts. This new type has evolved during the last decade, in response to the inexorable law of demand and supply. She is young, pretty, attractive. She bears no resemblance whatever to the miserable, brokendown, worn out, prematurely aged hag who eked out a miserable existence soliciting on the streets. As you meet her on the street, you would never realize that you are standing face to face with society's greatest tragedy. Her conduct is as exemplary as that of any young miss out shopping or walking; she dresses stylishly, and is neither more nor less lavish in the use of the henna, lip stick, rouge or black crayon than her reputable sister—you cannot tell them apart. She belongs to no class, race or creed; any girl of a good family may join her ranks without suspicion. To the average man who formerly sought the favor of the professional prostitute for the satisfaction of what to him was an uncontrollable, physiological demand, every girl today is fair game and the pursuit is constant. Goodman in the examination of one thousand clandestine or professional prostitutes found that fifty-four per cent were infected with syphilis and ninety-three per cent with gonorrhoea. The victims of this great menace are, in a high percentage, our future citizens, raised by loving parents, who have taken every care to protect them and warn them of every danger except, either through ignorance or prudery, the one great danger which confronts most every youth. It is an act of justice, no less than one of self-preservation, that society should allow no boy,

\*Read before Mississippi State Medical Association  
Jackson, May 13-14, 1924.

young man or young woman to enter into promiscuous sex relations without a clear knowledge of those dangers to which he or she is exposed. Loose training and the economic necessity of postponing marriage are to be considered as factors in increasing promiscuous sex relations, with its inevitable result. One physician stated that three-fourths of his venereal cases gave similar history of having acquired their infection on joy rides at night where boot-leg liquor played its part.

### *Methods of Prevention*

Education has proven to be the greatest factor in modifying the venereal disease rate. Its full benefits will come only when every educational agency is enlisted in the cause and the facts carried to every American home. Early instruction bites deep and helps to form convictions which will stand against the assaults of later life. The greatest safeguard against infection is chastity. There is today, so far as I know, no real opposition by medical men to the statement that continence is perfectly compatible with health of body and vigor of mind. However, teaching, based on moral issues alone, is faulty. Schools then should include, with anatomical and physiological facts, the results and dangers of venereal diseases. It is erroneous to assume that even a large majority of boys will reach the age of twenty-five without having had sexual experiences. Obviously the educational propoganda must reach the adult population through lectures and literature, such as those used in the program of the United States Public Health Service. The educational program has already proven effective in the respect that those with new infections are coming for earlier treatment, and many chronic cases are returning for treatment. As evidence of this fact, in 1916 the ratio of tertiary to primary and secondary lues reporting for treatment was 1.6 to 1, whereas in 1921 the ratio was 2.7 to 1.

Prophylaxis has engaged the attention of many, but should be relegated to a position subordinate to educational training. Its advocacy might have several undesirable effects. First; that it suggests a moral sanction to vice; second, that it gives a false sense of security and may lead to more frequent exposure; third, that it may deter the individual from seeking early advice or treatment; and fourth, that it may be used for treating the disease, should it arise, and so delay skilled treatment in the early stage when professional care is

most needed. At best it is only "shutting the door after the horse has been stolen."

As medical counselors of the American public, the physicians must recognize their responsibilities in this problem. If my observations are to be depended upon, the large majority of the medical fraternity is not making a sincere effort to support the program of the United States Public Health Service. Some physicians consulted in such cases, treat the condition lightly, prescribing perhaps a bottle of medicine with casual instructions to let the patient go and fight it out alone. Such treatment is unprofessional and deplorable. It either means that the physician is not equipped to care for such cases, or that he does not fully recognize the gravity of his responsibility, or the necessity of clinical observation. The tendency to depend upon a pathological or bacteriological examination is obviating the importance of clinical investigation at the hands of the doctor. This necessity, however, is indicated by the following facts:

1. That the treponema pallidum can be demonstrated averagely on dark-field examination in only sixty per cent.

2. A negative Wasserman means nothing, while a positive Wasserman is only strong presumptive evidence that a patient has syphilis. A positive reaction does not necessarily mean that the lesion in question is syphilitic; that the patient is actively syphilitic or that he requires treatment.

3. Owing to the varied morphology of the Bacillus Ducrey, and to the difficulty encountered in demonstrating it, examinations of scrapings are, in most cases, futile.

4. In subacute, chronic or recurrent cases of gonorrhoea it may be impossible to demonstrate the gonococcus in more than fifteen per cent of cases.

The effect upon the patient is most unsatisfactory, for it minimizes the seriousness of the condition and sanctions the responsibility of considering himself well, when such is too often not the case. Here it may be pointed out that it is all important that the physician report all cases, so that they may be effectually followed up by the social service of the Public Health Department. The physician should so fully recognize the necessity of this feature of the venereal disease program that legislation requiring every physician to report would not be necessary.

The psychology of some of the venereally infected is remarkable and menacing. Despite the knowledge of their condition, they

carry on seemingly with a spirit of vengeance. Nothing can cope with this type except detention, which a number of our states are now using effectively.

Free clinics are a national necessity to care for and educate that most unfortunate class of society who cannot pay.

The state legislatures could express no stronger endorsement of this anti-venereal campaign than to strike a vital blow at the patent medicine and nostrum vender, quacks and the practicing druggist.

To be sure, nothing new has been brought forward, but it is my hope that I have reminded you that the weapons we have had will still prove effectual if we use them.

#### DISCUSSION

Dr. Hardie R. Hays (Jackson): I am very glad Doctor Hennessey has brought up this subject at this time. We have been trying to do a work in which we have been very much handicapped by a cut in our appropriation for last year's work, and it is only through the loyal support of the medical profession that we are going to be able to go forward in this work of controlling venereal disease.

Doctor Hennessey brought up the economic loss. So often we have considered venereal disease as a question that should be dealt with by the preachers. In fact, one of the legislators said to me: "If you would go to preaching I would be glad to help you out, but it is a condition to be handled by the preachers." Let us divorce such work, if we can, from the preacher's work, and let us face it as we would any other contagious disease, just as if it were smallpox, or typhoid, or anything else that is a cause of economic waste. I daresay there is nothing today that is costing the people of the State of Mississippi more than is venereal disease. Yesterday I was talking to one of the malaria control men and he brought up a new phase to me. He said we are going to have to control hookworm and syphilis in order to control malaria, so intricate is the problem. In our big sawmills, in our railroads and industries and all the way along we are getting losses right straight along from venereal disease. A person may not be incapacitated, he may be able to carry on, but when that person who seemingly is able to carry on becomes hurt or devitalized in some way it appears that he is completely knocked out and his syphilitic condition asserts itself and causes a great deal more of a loss than if he had not had this disease before overtaken by the accident.

The statement was made in the paper that venereal disease probably had increased. It would seem from the information that we have at hand here that it is not increasing, but that there is more venereal disease treated than ever before.

That was brought out in the latter part of the paper where the number of new cases, that is, the number of primary lesions reported were decreasing. We are striving in every way possible to get the person infected with venereal disease under the doctor's care. When we began the work in this State the majority of people infected with venereal disease were going to druggists and getting a proprietary remedy or something of that sort, and you would be surprised to see the people who were well educated that were going to this source for treatment. But now I think we have gotten into the hands of the physician a large majority of these cases.

Another point is that we lose time by writing a patient to go to his family physician for treatment. He sends back a letter: "I went to my family physician and he says he does not treat this disease." And when a person is turned down by his family physician he does not know where to go. So I want to make an urgent plea that if you will not treat these diseases then please get the patient safely into the hands of someone you know is competent. If these men came to you for appendicitis you would not say: "I am not a surgeon." You would give them the advantage of your knowledge of surgeons and put them into the hands of some competent surgeon.

Dr. William L. Little (Wesson): I want to stress the prevention of these diseases. Doctor Hays said someone said to him if he was a preacher they could get together. I think we should act with the preacher and have him act with us. If we expect to prevent these diseases we must, as medical men, stand for what is right in our community. We should co-operate with those who try to prevent the sale and manufacture of whiskey, as intemperance often times leads to vices that increase commutable diseases. We should ever stand for the right in upholding the law. We should urge the public school teachers to assist. Sunday school teachers in having the people attending church and Bible classes. I think that is the way to prevent these things—we should teach by example, living close to the narrow way. If we do that we will have less of these things.

Dr. William H. Frizell (Brookhaven): As far as Doctor Hennessey expressed an opinion as to the moral side, there is more moral side than anything else. We should not begin with any preacher, or any society, or anything else of that kind. Those of us who have boys should speak to them. It is the mother's duty to speak to her daughter.

I have been practicing medicine a good while, and all the venereal disease is not among men and boys primarily. Neither is it due to blind tiger whiskey always. Blind tiger will excite the mind, but so often it acts as a depressant upon one's desires. I should not begin with the preachers and teachers. The preachers can never control venereal disease. It is to be done in the home. Our troubles, moral and otherwise, begin around the hearth, and it is our duty, as fathers and as physicians, to instruct the boys. A boy can live a life of continence if he will.

Doctor Hays said he was sending them back to the family physician. Some of them were driven away from us by the Public Health Service compelling us to report cases, but they are coming back, and we find that some physicians are reporting four or five cases of syphilis, new cases, where they did not report that many cases in five years before.

Dr. Robert S. Curry (Jackson): I have some

knowledge of the conditions in this State, and I believe this is one of the most important papers that has been brought before the Mississippi Association. These diseases are far-reaching in their baneful effects upon the health of the people and are causing perhaps as great economic loss as any other diseases in the State. The production of these diseases is so interlinked with the moral situation that you can hardly divorce it from the moral and religious conditions. Everybody knows that the doctor primarily is the man who has to control this situation. We know that the minister cannot do it unless he has the support of the medical man, but everybody sees hope in the fact that now the doctors in the State of Mississippi and in the country at large are willing to co-operate with other agencies for the prevention of these diseases.

It is alarming to me to know that 80 per cent of the operations on women are due to venereal diseases. That is a deplorable situation. I believe the educational campaign that is now being carried on will go far toward remedying this situation. I cannot understand why, if you take a young mind at the impressionable age and teach it wholesome facts about this horrible condition and the great trouble it brings—I cannot understand how these facts will ever be removed from that mind.

Dr. Russell A. Hennessey (closing): There were a few points brought up in the discussion which I would like to correct.

I did not wish to minimize the clergyman's position in this venereal disease problem, but wished to imply that teaching along spiritual line has had its opportunity and has not, in my opinion, proved effectual. It is for this reason that I offered the suggestion that in the educational program venereal disease facts should be taught in connection with anatomical and physiological courses. This, I believe, will impress upon the young mind the dangers of venereal disease and prove more valuable than moral training alone. I think the doctors, realizing their responsibility, might volunteer to take part in the school programs or proffer their information in any other educational way. Family education and just what part the father and mother take in this question is of no small importance. Certainly, they cannot impress upon their prodigy in an intelligent manner anything about the dangers of venereal disease until they first have comprehensive information. The ignorance of the majority of fathers and mothers concerning this everlasting menace is most appalling. The only way they will be reached is through national educational programs, sponsored by the U. S. Public Health Service.

It has been stated that some doctors failed to report their venereal disease cases because the knowledge of reporting drives from them prospective patients. This will have to be overcome by intelligent instruction of the patient in the necessity of reporting to prevent venereal disease and thereby availing another misfortune such as they are seeking relief from. It should be explained that these cases require control because they are a menace to society, and that they are reported by number rather than name unless it is necessary to apprehend them. Every ethical doctor will recognize this necessity and his responsibility in this great problem to report all cases and thereby obviate the necessity of state legislation to enforce reporting.

## THE EYE AND THE CLINICIAN\*

T. J. DIMITRY, M.D.,

NEW ORLEANS

I am dissatisfied with the explanation offered for the cause of a great number of eye pathologies, and I am of the belief that these diseases are improperly handled through neglect to search out for factor productive of condition, and further; charge specialists with treating local manifestation as self subsisting entities. If the specialist is to find the etiology of a morbid condition, he then will be compelled to broaden his study and to change his deductions from a limited view, to a greater expanse, if he hopes to reason logically from cases and not from effect.

You will admit with me that the body of man is as a labyrinth and with a study of its diseases we add increased difficulty to the puzzle, and though we be conversant with one or more of its secreted traps we can but remotely hope to discover the minotaur if we have but a knowledge of a part. The monster strikes, hides remote and continues to repeat the assault until the body elements find him unwelcome and destroys, or until he is discovered by those practicing the medical art.

Has it ever occurred to you, how few diseases are primary, i.e. if you exclude trauma, malignancies and infections? Has it ever occurred to you how often we treat effect and not cause? This query is the reason for my contribution, further, with a desire to stimulate investigation, thoroughness of examination and to use logical deduction in explanation of disease.

Ophthalmology is a specialty of a part, the eye, if we should assign to this part a self subsisting or developed morbid entity per se, we admit thereby that the condition has arisen by chance, a mishap or a throw of the dice. I question that there can be found a single morbid entity for the eye of the many eye pathologies, and further claim that idiopathy, defined as a morbid state, not produced by a preceding infection, is a misnomer. My confreres might admit that my postulate is correct but add that my contention is equally true for other parts of the body; the skin, the bones, the thyroid gland and the appendix, etc.

Disease of the part is an expression from

\*Read before the Louisiana State Medical Society, Opelousas, April 22-24, 1924.

the whole or from another part. It may be transmitted from a part to another part but the original cause is not within itself. The reason the branch of the mighty oak fell was that the worm was within the bud.

"Admit this truth that naught from nothing springs, and all is clear."

Then can you see with me the necessity for broader medical knowledge for the specialist, and why he should neither be isolated or isolate? You will admit with me that a part for instance the eye is dependent upon the whole, and that the principle of life is that the parts are mutually dependent and contributory to each others function.

"Look round the world: behold the chain of love  
Combining all below and all above.  
See plastic nature working to this end;  
Atoms to atoms—clouds to crystals tend.  
See dying vegetable life sustain;  
All served, all serving, nothing stands alone  
The chain holds on and where it ends unknown."

If the study of disease is a study of a part then the most painstaking examination is incomplete, if it is of the part alone. The good clinician delves into the trunk while the specialist is assigned the part, if either separate from the other, he is neglectful of a complete examination. General medical knowledge should continue to be ruled essential for the acquiring of a specialty and the specialist should rule that his general knowledge should increase in concert with his special knowledge.

The specialist should possess general knowledge plus his specialty. The clinician should possess general knowledge plus the specialties. The latter should be as it were a super physician, he should imbibe from each specialty and his broad knowledge should grant him the privilege to draw a conclusion from a maze of evidence. This ideal is not as yet and until it is it behoves both the clinician and the specialist to strive toward these stated demands.

It has been stated that the clinician is being pushed aside. It may appear so, but I see his future more promising and it is the specialist who will fall back if he should be neglectful of his general medical knowledge while increasing his knowledge in his specialty. If there is to be relegation it is to the surgeon who is qualifying himself in mechanical details and neglecting general medical information.

If any specialist adheres to the therapeutics of his limited field, he then treats

effect and not cause. Can you conceive of an optic nerve being diseased because of a fault inherent in itself, or of a choroidal, retinal, or scleral disease springing into existence sine causa? Then you will admit that there is no justification of administering to the part without an investigation of the whole. I made ophthalmology pertinent but any of the other specialties would have been suitable. Many internist sees kidney disease as a local condition and we know that the surgeon removes the thyroid without a knowledge or explanation as to why it hypersecreted. Just as the appendix is removed, using a woman logic, "because," saying it is diseased, but not why.

I recite a few cases which will demonstrate the necessity for thoroughness and had we reasoned from cause and not effect, we would have more properly accounted for the condition.

First observation—Mrs. M. was referred by a gynecologist; he stated that the patient, one week previously had given birth to a child, that she had gone blind, and the urine contained fifty per cent albumen. Eye examination showed a fundi retinitis. She did not die, but returned one year after, condition of eye had cleared up, urine free of albumen and casts. The fundi now showed a definite choked disc. The woman died, atopsy held; the meninges were found diffused with gummata. The gynecologist saw but the pregnancy, the internist the kidney and the ophthalmologist the eye. The woman died for want of a complete investigation.

Second observation—Two children had scarlet fever, result casts and albumen. Ill nourished, multiple styes. These styes were lanced, ointments applied. The internist concluded the kidney trouble was the result of scarlet fever, restricted the diet, diuretics, rest, etc. Ophthalmologist explained styes as a hair follicle infection, in spite of the fact that his lancing and ointments did not cure. Investigation of tonsils revealed them filled with streptococci. They were removed, ill nourished children improved, styes cured and albumen and casts disappeared.

Third observation—Iritis in a young girl with a Wassermann negative. Atropine drops were used and the iritis was cured. This case was referred by an internist because the patient complained of the eyes. A few weeks after was operated on for a fistula in anus without investigation, develops coma. They then discovered sugar, ace-

tone, etc. The patient died. Had the internist realized that the eye was a part of the whole he would have at least have started the investigation. The ophthalmologist was not justified in supposing and the surgeon saw but a mechanical fault. The patient was the victim.

You would not find it difficult to recite a number of such cases, all which convey the necessity for thoroughness? I wonder in these cases who was at fault. The surgeon maintained that his duty was local. The oculist adhered to his specialty and the internist saw but a local manifestation. The fault is in specializing, in which the specialist has neglected his general medical knowledge, the surgeon interested in surgical details and the internist lacks sufficient versatility to handle the situation. To correct the fault, demand of the general practitioner versatile knowledge, and assign him the title Nestor, for he should be a man preeminent for wisdom, and the specialist an adjunct to this better qualified man.

This you may say is impossible for the present. Then the specialist shall be guilty of great offense should he neglect to keep abreast of general medical knowledge.

I might have selected different eye diseases and recited faults in assigning them as entities but I have attempted to make my contention more general yet convey my message.

The ophthalmologist should advance his general medicinal knowledge in concert with his knowledge in his specialty.

#### DISCUSSION

Dr. Charles Bahn (New Orleans): I think we are indebted to Doctor Dimitry for presenting in such an interesting way some of the fundamentals that we perhaps lose sight of. One is, that in examining the eyes of a patient we must understand something of the human being of which the eyes are a part. Every man should understand the whole human being, not simply look at the eye.

His conception of eye diseases, that they are reflected elsewhere in the body, is a subject upon which we may differ slightly because none of us are sure. He assumes rather that the eye is like Oliver Wendell Holmes' "One Hoss Shay," that ran a hundred years to a day and then fell to pieces. I believe certain parts of the body do wear out before other parts, and I believe that we have a certain number of diseases of the eye which represent premature senility. There are

certain affections which register directly and primarily in the eye.

But we are indebted to Doctor Dimitry for presenting this interesting subject and emphasizing the necessity of thoroughness and a better understanding of every branch of medicine.

Dr. Henry Menage (New Orleans): It seems hardly fair to allow a paper of such academic and educational importance go by without a word from other specialists. I consider the paper written by Doctor Dimitry of extreme importance from an educational standpoint. In our department, diseases of the skin, we have a course every year for the post-graduate men who are in general practice. In the treatment of diseases of the skin there are many of the inflammatory group which are obscure from an etiological standpoint, but the trouble is to get the men to apply the tests. If a doctor has a case of eczema he expects a prescription for it. He feels almost affronted when we tell him that we have no prescription per se for eczema. As a matter of fact, we try to emphasize year in and year out that the thing to do is to look for the cause of the condition. In dermatology we have innumerable examples of that. We are said to be behind the times because we cannot tell the cause of the major part of the inflammatory diseases of the skin.

I think Doctor Dimitry's paper is very timely, and particularly educational.

Dr. D. O. Willis (Leesville). I rise, not as a specialist, but as a general practitioner. I want to thank Doctor Dimitry for this splendid paper and the points brought out in it—the necessity of more thorough investigation and understanding of some things. This especially impressed me because I had a case in my own family. I had a son who some years ago began having trouble with his school work on account of his left eye. I found that then he could only make out a person about twenty feet away with his left eye. I carried him to some of the most prominent men all over the country, but he grew worse until he was finally totally blind in the left eye. They could find no cause whatever for it. Nobody ever suggested a cause for the blindness. About two years later that boy broke down generally in school and was given a vacation, because we found he had a case of Hodgkin's disease. I am glad to say that he is one of the few who have apparently made a perfect recovery from Hodgkin's disease. This was diagnosed by some of the most prominent men in the United States and treated by men who perhaps know more about this disease than anyone else. He made a complete recovery from Hodgkin's disease, or was declared to be free of symptoms in April, 1917, and since that time he has been perfectly well. After he recovered from the Hodgkin's disease his eye got better and he now sees very well with that eye.

Was there a connection between the two conditions or not? We do not know.

Dr. T. J. Dimitry (closing): I desire to thank Doctor Bahn, Doctor Menage and Doctor Willis for their discussion of this paper. I might state that one of the serious faults in the development of diagnostic clinics is to find a man of ability drawing logical deductions from the evidence that may be submitted to him by his confreres. And unless we have an internist (the superman) and leave the decision with him and make of him the Nestor, we will still find diagnostic clinic work faulty.

A CONSIDERATION OF THE HEART  
FROM THE STANDPOINT OF  
FUNCTIONAL CAPACITY\*

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Modern conception of cardio-vascular disease seeks to interpret the degree of functional impairment of the vascular and cardiac mechanism.

The recognition of disease as a disturbance of function is particularly rational in the potential or actual cardiac case. Upon the pathology of the myocardium, ultimately depends the efficiency of the individual.

The heart, acting as a force pump to sustain the circulation, holds in reserve certain physiological properties which meet the requirements of excess exertion above that necessarily entailed in the actual maintenance of circulation. This physiological attribute may be expressed as the functional capacity or power reserve of the heart. Therefore the individual physical efficiency of the heart case is ultimately dependent upon the power reserve of the heart, and heart failure expresses itself as a decrease in the functional capacity of the myocardium.

While undoubtedly certain peripheral factors, e. g. increase in peripheral resistance through passive congestion of some distant organ, contribute to a marked degree to failure of the circulation, the key to the actual condition of the vascular and cardiac mechanism is in the pathology of the myocardium.

The maintenance of physiological circulation is ultimately dependent upon the ability of the heart to do its work and the ability of the heart to perform its prescribed amount of work is in direct proportion to the efficiency of the myocardium. Therefore, confronted with the actual or potential heart case, the prime question of importance is: What is the ability of this particular heart to do its work? In other words, what is the reserve power or functional capacity of the heart?

The answer lies in determining the degree of functional inefficiency of the myocardium. Seeking methods through which the condition of the myocardium might be ascertained, many functional tests have been devised. Each of those now in general use has been subject to criticism and the present status of cardiac functional tests

is a mean between enthusiastic endorsement of an optimistic school and adverse criticism of a less optimistic and more conservative group of clinicians.

Recognizing the importance of determining the condition of the myocardium in heart disease, it would appear interesting to discuss the several tests used in the functional diagnosis of the heart and through such a study seek to estimate the clinical value of the group as applicable in daily routine practice.

The present methods of complete analysis of heart function embrace (1) Certain clinical observations, (2) tests depending upon changes in pulse rate, (3) tests depending upon blood pressure studies and blood pressure variations, (4) information gained through the use of certain mechanical instruments, e.g., the polygraph, electrocardiograph, X-rays, etc., (5) Certain metabolic studies.

Observations on the clinical study of heart function would embrace the detection of various arrhythmias, variations in the rate of the heart and pulse beats, certain auscultatory signs which might be indicative of decrease in the force pump action of the heart and evidences of circulatory embarrassment in distant organs.

Among the arrhythmias which are definitely known to attend or induce decrease in reserve power of heart action are, pulsus alternans or alternation of the heart, and the pulsus irregularis perpetuus of auricular fibrillation and flutter. The cause of pulsus alternans is not adequately understood, but clinical observation has given proof of the fact that such an arrhythmia is indicative of gross degenerative changes in the myocardium and extreme exhaustion of the heart muscle. In the pulsus irregularis perpetuus of auricular fibrillation and flutter, overstimulation through indiscriminate and unavailing ectopic impulses leads to a waste of myocardial energy and ultimately to a loss of reserve power.

It has been stated when premature contractions are so frequent as to produce the classical pulsus bigeminus or trigeminus, that during the long compensatory pause following the premature systole, the heart is over-filled with blood, and consequently the succeeding strength of ventricular contraction must be above that of the normal, and that the frequency of such extra amount of work would ultimately lead to decrease in functional capacity. A knowledge of the normal cardiac cycle, however, would seem to indicate that during the long compensatory pause following the

\*Read before Mississippi State Medical Association  
May 13-14, 1924.

premature systole, the aortic valves are closed and pressure in the aorta falls. Therefore, even though the left chamber of the heart is over-filled with blood, pressure in the aorta is low and as a result of the low pressure in the aorta, the force of left ventricular contraction in overcoming aortic pressure would not necessarily be above that of the normal. One might rationally assume, however, that in the presence of increase in peripheral resistance, the occurrence of permanent pulsus bigeminus or trigeminus would ultimately lead to a weakened myocardium.

Of the variations in the heart rate, tachycardia assumes the greatest importance. A persistent tachycardia which does not permit of proper filling of the ventricles and produces a rapidly acting heart, entails an amount of work out of proportion to the normal demand and leads to myocardial exhaustion with decrease in functional capacity.

In auscultation of the potential or actual heart case, it has been stated that if there is insufficiency of the force or power of left ventricular contraction as a result of impaired contractility or elasticity, the aortic second sound will show a reduction in intensity following exercise owing to a smaller systolic output of blood. Likewise in right ventricular weakness, the pulmonary second sound would show a relative decrease in intensity following brief exercise for the same reason.

Of the clinical signs in other organs, stasis in the pulmonary capillaries with consequent dyspnea is classical evidence of loss of reserve power. Perhaps one of the earliest signs of heart failure is the detection of fine crepitations in the bases of the lungs. Likewise stasis phenomena, such as edema, ascites, hydrothorax, etc., are indisputable evidence of broken compensation.

In recent years, the popularity of tests depending upon variation in pulse rate, as an indication of functional capacity has increased. Such tests have as their basis, (1) The effect of changed position upon the pulse rate, (2) Effect of exercise upon the pulse rate. Numerous observers have stated that a normal slowing of from seven to fifteen beats per minute occurs in changing from the standing to the recumbent position. It is stated that this normal response is lost in decompensated valvular disease, or when the myocardium is weakened from any cause. One cannot but be impressed with the role that psychic fac-

tors might play in the employment of such a test.

The effect of exercise on the pulse rate has been widely employed as an index of functional capacity. Mendlesohn states without equivocation that the greater the amount of work done with prompt return to the normal rate, the greater is the functional capacity of the heart.

With the introduction of mechanical methods of obtaining blood pressure many tests based on blood pressure estimations came into use. Among those which have been used may be mentioned, (1) Effect of change of posture on the blood pressure, (2) Effect of exercise on the blood pressure, (3) Delayed rise of blood pressure following exercise, (4) Tigerstedt's factor or the so-called cardiac efficiency factor, (5) Cardiac strength or cardiac weakness factor, (6) Phase variations of Tournai, (7) Effect of compression of femorals.

Crampton has stated that normally systolic pressure is increased on changing from the recumbent to the standing position, and that in myocardial weakness, it remains the same or is decreased. Recent observations, however, have raised a serious question as to the accuracy of this statement.

The effect of exercise on the blood pressure has been assumed to be an indication of the functional efficiency of the myocardium. The stair climbing test of Selig is perhaps the most commonly employed on account of its simplicity. Selig observed in a series of known heart cases, that the blood pressure rose on an average of 10 mm. Hg. per minute, while in normal cases the blood pressure rose on an average of 8 mm. Hg per minute. Concomitantly with this observation, the patient corroborates the finding by his complaint of fatigue and shortness of breath on exertion.

Recently Barringer has described an exercise tolerance test which consists of making frequent readings of the pulse rate and systolic blood pressure after measured amounts of work. A number of subjective symptoms may be noted, e. g., dyspnoea, palpitation, fatigue, precordial distress, expression and the color of the face, and the time in which the pulse rate returns to normal. In the absence of subjective symptoms, he believes that a delayed rise and a prolonged fall in blood pressure is an indication that the capacity of the heart has been overtaxed. The role of nervous and psychic influence here again offers the possibility of considerable error in the interpretation of the test.



The so-called cardiac efficiency factor of Tigerstadt has been advanced as an indication of cardiac functional efficiency. He reasons that the pulse pressure or volume output of the heart multiplied by the pulse rate represents the velocity of the circulation. The systolic pressure multiplied by the pulse rate represents the total amount of work done in the circulation. The quotient of the velocity of the circulation divided by the total work in the circulation, gives the efficiency of the heart as a pump. This is called the blood pressure coefficient and in the normal is between 25 and 35 per cent. A cardiac efficiency factor over 40 per cent or below 20 per cent is assumed to indicate myocardial inefficiency.

As an indication of myocardial efficiency the cardiac strength cardiac weakness factor has been studied by observation of the relation of the five phases heard in the auscultatory method of estimating blood pressure. Certain proportions of each phase to the pulse pressure are observed in the normal, and it is assumed that these proportions have a functional significance. The element of heart weakness is regarded as the first phase, plus the fourth phase. The element of heart strength is regarded as the second phase plus the third phase. In the presence of circulatory inefficiency the element of heart weakness progressively encroaches on the element of heart strength. In cases of serious functional impairment, no phases may be shown or one phase may be lacking.

Tornai in studying blood pressure estimations by means of the auscultatory method describes six separate and distinct phases and upon certain variations in the relationship between these tones to each other, he bases his cardiac functional test known as the Phase Variations of Tornai. He states that in healthy people an arterial murmur is normally heard in blood pressure readings. In the normal heart this murmur has a normal variation in duration and position after moderate exercise. After brief exercise in healthy persons, the murmur increases in duration and approaches the maximal point of blood pressure. After the lapse of three to five minutes, the heart returns to its normal phase relation. After fatiguing exercise, the maximal and minimum pressures fall and the position of the murmur is lower in its relation to the maximal point. Therefore, if after brief exercise, the arterial murmur begins higher and nearer the maximal pressure, and no fall has occurred in the maximal and minimum pressures, it

may be assumed that the heart is sufficient in its reserve power to perform the prescribed amount of work. In myocardial inefficiency, the arterial murmur is lowered.

Reasoning from the experiments of Marey and Weber, who found that the blood pressure in normal animals increases after ligation of a large artery or compression of the abdominal aorta without increase in the heart rate, Katzenstein devised a cardiac functional test which is based upon the assumption that if peripheral resistance is increased, blood pressure is raised in the normal, but no increase in heart rate occurs. The strain falls directly on the left heart as a result of increased ventricular output. His method consists in ascertaining the blood pressure and pulse rate at absolute quiet and rest. Both iliac arteries are then digitally compressed from two to three minutes, and the response of blood pressure and pulse rate ascertained. From numerous observations, the following standards have been deducted. (1) In normal compensated hearts, after compression of the iliac arteries, the blood pressure rises five to fifteen mm. Hg and the pulse rate falls. (2) In hypertrophied compensating hearts the blood pressure rises 15 to 40 mm. Hg and the pulse rate falls or may remain unchanged. (3) In beginning decompensation the blood pressure remains unchanged while the pulse rate increases. (4) In cases of cardiac decompensation, the blood pressure falls while the pulse rate increases considerably.

Here again, the psychic factor as a result of pain upon compression of the iliac arteries, may produce considerable error in the accurate interpretation of the test.

The recent introduction of the electrocardiograph has aided materially in establishing the prognosis of various heart lesions and establishing the actual condition of the myocardium in suspected heart cases.

Through the use of the X-rays, attention was called to a so-called myocardial retraction reflex which consists of a contraction of the myocardium of varying duration as a result of percussion of the spinous process of the seventh cervical vertebra or irritation of the skin of the precordial area. In myocardial degeneration or large dilatation, this reflex does not occur.

Certain metabolic studies have been regarded as an index of cardiac functional capacity. Upon the principle that the concentration of the urinary ingredients de-

depends upon the velocity of the circulation, it has been asserted that under certain prescribed conditions of diet and exercise, the molecular concentration of salt in the urine as measured by the freezing point may be regarded as a test of circulatory efficiency. With reduced circulation, there would be a decrease in sodium chloride concentration and with acceleration an increase. Recent experimental work, however, has tended to prove the inaccuracy of such a test.

Brettingham and White, after a careful analysis of various cardiac functional tests, selected two which gave promise of the best results, viz., the determination of the vital capacity of the lungs as an index of myocardial efficiency and exercise tolerance tests with observations of the effect on systolic blood pressure. After a series of very careful observations, they came to the following conclusions. "Vital capacity determinations add to the exactness of records but give little aid in the clinical study of a patient." "Exercise tolerance tests are applicable to a limited type of case, but even there give little information of the actual cardiac condition." They found vital capacity and exercise tolerance determinations to be markedly at variance in 14 per cent of the cases in which both tests were performed.

From the above analysis of cardiac functional tests now in use, it may be assumed that no one distinctive test adequately expresses the actual condition of the myocardium. The complimentary action of the vaso-motor system and physiological action of muscular tissue are factors of prime importance in maintaining circulation. These factors vary and are different in different individuals and it is such difference and variation which produce the greatest source of error in seeking to determine the efficiency of the circulation.

While it may be stated that no one test may be taken as a criterion of cardiac reserve power, the group employment of certain practical tests, together with careful clinical observation and examination, yields information of decided value in the prognosis and therapy of heart disease.

#### DISCUSSION

Dr. W. A. Dearman (Long Beach): The question of cardiac functional capacity with its vascular supply is one that is extremely interesting. I may say at the outset that I look upon Doctor Rowland as one of the most competent cardiologists of the day. I think he should be in New York practicing cardiology.

He has outlined the various tests that we may employ to test the integrity of the heart muscle

with its vascular supply. A man may be feeling well apparently, not having any subjective or objective symptoms of cardiac trouble, and he may drop dead at the breakfast table. This may happen after he becomes angry, after a full meal, or after violent exercise. I have attempted through several years to classify my cardiac cases with reference to functional capacity of the heart, because we do not know how much the heart will stand under various circumstances. It is remarkable how a man can live for years and years with a decompensated heart, and yet another man at middle age will drop dead at the least provocation. It is a serious situation and brings out the point that the doctor, while conserving the health of his patients, should also pay some attention to his own heart, because we, like our patients, are subject to these same maladies and disorders. The doctor has long hours, he works mentally and physically; some are great eaters, and some use coffee and tea and coco cola excessively, and are tobacco users. What will happen to you in middle age? It is said that cardiac disease has caused more deaths in the United States than any other disease. Bear in mind that the dangerous heart is the murmurless heart. We pay very little attention to a murmur if the heart is well compensated.

Rest, and rest alone, is the remedy for heart disease. Digitalis, to my mind, has a place, but not in the treatment of all the cardiopathies.

I think a patient should be advised as to the condition of his heart, even if you have to tell him he is liable to drop dead. It is well to give him all the information possible, and if he is a man who is lifting heavy loads, have him change his occupation. I tell many that when the heart is working at ordinary capacity it does as much work during the twenty-four hours as it would require to raise a ton a mile high; but when at rest mentally and physically, it only has to raise that ton a foot high.

I think when a man gets to forty he should change his mode of living, and he should eat less meat. So it behooves the doctor to conserve his health and welfare as well as that of humanity at large. We must make sacrifices. Our work brings on premature old age, degeneration of the arteries and of the heart, and finally we fall victims to cardiac disease that from the onset is not so noticeable, but is dangerous in the end.

I always instruct a patient never to crank an automobile, never to run up or down a grade, never to do anything to put extra strain on the heart muscles. These patients should never run up or down stairs; never overload the stomach; sleep until 9 a. m.; go home at 3 in the afternoon. All these are valuable assets to the patient suffering of heart disease.

Dr. N. S. Stern (Memphis, Tenn.): This paper is excellent, yet from a practical point of view these tests by their very multiplicity show that none is satisfactory. The best way to test the functional capacity of the heart is to study the patient's history carefully—not so much what you find on physical examination, but what the patient tells you—how much exercise he has been accustomed to take, and whether it brings on faintness or shortness of breath. If a man gets short of breath sooner than he used to he is beginning to suffer from myocardial insufficiency. If a man gets faint after exercise that he formerly could do with ease, he is beginning to suffer from this condition, provided that certain other

things are ruled out. Tuberculosis, for instance, will run a patient down, cause disability, and sometimes dyspnoea. But if such things are ruled out, then you can gauge the capacity of the patient's heart by what the heart can do. If a patient can do a great deal without any of these symptoms, then the capacity is good; if a patient can do little, the capacity is poor, even though the physical examination is negative.

In cases of angina one very often finds a completely negative physical examination. The pulse rate and blood pressure is normal; there will be nothing from which you can judge except the subjective symptoms of the patient. If you let the patient go because his physical signs are negative you are doing a dangerous thing. You must base your prognosis upon the patient's age, upon his reaction to exercise. That is the most thorough and accurate method of determining the functional capacity of the heart.

There are other subsidiary methods, particularly of value with regard to prognosis. As the essayist says, the myocardium is the thing we must study carefully; it is the active portion of the heart; it is what does the work. The valves are subsidiary. But if certain factors tend to increase the work of the heart muscle, then these factors tend to create myocardial insufficiency. High blood pressure creates an additional burden for the heart. Valvular disease with leakage is something the heart has to overcome. The same thing is true of the disorders of the rhythm of the heart. They are important only so far as they interfere with the capacity of the heart to do its full work. Prognosis must, therefore, depend upon how serious each one of these is in its effect upon the myocardium. Many times the myocardium has a wonderful come-back. That is particularly true in mitral stenosis. Patients with this lesion may break six or eight times before they finally go to pieces. Etiological factors likewise have reference to prognosis. But the important thing to remember is that the myocardium is the chief factor to be taken into consideration. If you study your patients well you will be able to arrive at a fairly accurate conclusion as to what the myocardium will do.

Dr. Whitman Rowland, Jr. (closing): I am absolutely convinced that the individual functional capacity of the myocardium varies at different times with the individual. Why is it that there are so many diagnoses of acute indigestion? The reason is that after a heavy meal the extra strain is thrown on the heart. A lowered functional state fails to meet the strain and acute dilatation occurs.

I am furthermore convinced that the individual capacity of the individual heart may be strong today and weak tomorrow. I am not prepared to give experimental work to support that statement, but I believe it is true.

I am not interested in the heart itself from the standpoint of the gross lesion so easily detected, but I am particularly interested in the heart that apparently has nothing wrong with it and the next thing you know there is a funeral. A patient not long ago—a man who went home to his midday meal complaining, not of heart symptoms, but simply complaining. He came back to his desk, started to do a piece of work, turned to his assistant and said: "Call a doctor." In ten minutes he was dead—died of acute dilatation of the heart. I am interested in the study of the heart as illustrated in this case.

So many things might be said that cannot be said in a short space of time. One of the practical points that might be brought out is that in certain cases of indigestion, so called dyspepsia, it is well to bear in mind the individual may have some heart involvement, a lowered cardiac functional capacity, which on careful examination may be detected.

After using the various functional tests, I am prepared to state this: a careful clinical examination of the patient, exercising keen judgment in sizing him up—the general expression of his face, the way he carries himself, etc., is of the utmost importance. The employment of certain tests to find out how he responds to exercise is valuable in rendering an opinion.

In regard to the history of the case: This indeed is of great importance, and to be most carefully elicited. However, the average person without gross cardiac pathology hardly thinks of himself in regard to his heart. You may ask him if he suffers from shortness of breath on exertion, and he may probably say yes. On the other hand a man with a badly injured heart may say no. It is, therefore, wise to put them through simple exercises and get their response.

I do believe that a careful clinical examination of the patient with a knowledge of normal physiology behind it, combined with discriminating clinical judgment, will enable one to size up a patient, and the probability is that you can not only extend the period of his life, but perhaps save it.

## THE CLINICAL DIAGNOSIS OF CHRONIC PANCREATIC DISEASE\*

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NEW ORLEANS.

The pancreas, frequently diseased, but seldom accused, should receive more consideration in the diagnostic survey of abdominal conditions. This organ, comparatively small, lying deep in the upper abdomen among so many very important structures, has been to a great extent inaccessible to clinical approach and, therefore, neglected. On the other hand, much evidence has been gathered for a clearer understanding of pancreatic disease by surgical and pathological observations. These studies have aided us in the determination of the frequency of pancreatitis, and in the recognition of its important relationship to diseases in adjoining organs. Pancreatitis may be a primary disease or it may be secondary to an infection elsewhere in the body. The secondary type is usually the result of biliary inflammation. Deaver and Pfeiffer have demonstrated disease in the pancreas in 33 per cent of all cholecystitis cases. Appendicitis, peptic ulcer, and the commonly recognized foci of infection, are sometimes the source of the offending

\*Read before the Louisiana State Medical Society, Opelousas, April 22-24, 1924.

organism. The development of pancreatitis following surgical procedures, especially cholecystectomy, has been a clinical identification for many years. Brown, of Baltimore, reported several such cases in 1918, and the writer described two cases before this society two years ago. A substantiation of this clinical observation is the very recent and striking surgical report of Judd. This worker reports on twenty-four operations which were secondary to cholecystectomy. Seventeen of this number, approximately 70 per cent, developed an enlarged pancreas that was not recognized at the first operation. The original operation on ten of these seventeen individuals was performed by Judd. These facts rather tend to discredit the belief of some that removal of the gall-bladder is the operation for the relief of chronic pancreatitis and, furthermore, in face of these findings, it would appear that such a measure is rather contraindicated. Nevertheless, one should be prompted by these excellent observations to regard the probability of chronic pancreatitis in cholecystectomized patients.

As a further emphasis of the common occurrence of pancreatic disease, it will be recalled that the routine autopsy on individuals dying from all causes shows chronic pancreatitis to be a not uncommon lesion. Notwithstanding these numerous facts concerning the frequency of pancreatic involvement, a clinical diagnosis is somewhat difficult. The symptomatology is very much like that associated with inflammation of the bile passages. There may be recurrent attacks of acute epigastric pain, sometimes radiating to the back, under the right or left costal margin. According to Deaver, referred pain is more often felt when gallstones are present. There may be jaundice, flatulency and vomiting, with a history of prolonged indigestion. In the intervals, between the attacks, the majority show subnormal acidity and occasionally (about 7 per cent) there is a glycosuria. It may be interpolated, at this point, for sake of avoiding confusion, that there is no apparent functional relationship between the islands of Langerhans and the ordinary glandular tissue; disease usually affects one without affecting the other.

The jaundice in these cases is nearly always due to an associated lesion of the liver and gall-bladder. It may be caused by obstruction of the common bile duct, resulting from pressure of an enlarged pancreas. In instances of jaundice without obstruction, occasionally accompanied by

an enlarged liver, there may be another sign of diagnostic significance; namely, white stools. This stool is different from the fatty type usually found in pancreatitis. Notwithstanding the fact that considerable quantities of bile pigment may be flowing into the duodenum, as revealed by examination of duodenal contents, the stools are colorless. This phenomenon is due to a conversion of the bile pigment into white bile by a chemical change in the intestinal tract, resulting from an alteration of pancreatic function. A brief case history will serve to illustrate this point.

Mrs. J. L., age 36, was seen in October, 1923. She gave a history of having had digestive disturbances for several years. During the past two years there were three distinct attacks of biliary colic. The last two attacks were accompanied by a slight and transient jaundice. On examination she showed a deep jaundice; the liver was enlarged and irregular. The stools were almost white. However, analysis of the duodenal fluid showed that the bile flowed into the bowel and, therefore, no common duct obstruction existed. The operation revealed an enlarged liver, cholelithiasis, and a greatly enlarged pancreas. There was a very appreciable improvement following cholecystotomy.

The existence of a diarrhea, without demonstrable lesion of the bowel, should always make one suspicious of probable pancreatitis. Especially is this true when there is a history and physical findings suggestive of an old biliary infection. Moreover, a diarrhea of an intestinal origin may be associated with inflammation of the pancreas. In the latter condition, the stools number from 4 to 6 a day, usually in the morning before breakfast; however, the ingestion of food at any time may stimulate a bowel evacuation. The feces may be colorless or bright yellow, containing an appreciable quantity of undigested fat, or there may be considerable undigested protein in the form of striated muscle fibres. These undigested food elements are not always present, and especially is this the case when the intestinal function has compensated for the partial loss of pancreatic digestion. Therefore, we sometimes have to deal with cases of chronic pancreatitis not having definite signs of the disease. The changes in the gland become most difficult to detect, and therefore, require additional means, other than the ordinary clinical and laboratory procedures to demonstrate the alteration of function. Wherever possible, a thorough analysis of the pancreatic secretion for its digestive activity should be made. The value of such examination was recently shown by comparisons of the findings in normal and pathological individuals. The cases of chronic pancreatitis show an in-

sufficient secretion of the gland, which is represented by partial inactivity of the enzymes in the duodenal contents. The recent investigations of Doctor Denis and I have demonstrated the close relationship that exists between the secretory function of the pancreas and the diseases of the adjacent organs. Not unlike the stomach in some respects, the secretions of the pancreas may be altered by pathological changes in the biliary tract, stomach, and even in the kidney or spleen.

Carcinoma of the pancreas, representing a late sequela of chronic inflammation and irritation of this organ is to some extent preventable. Such prophylaxis can be accomplished when pancreatitis is more often recognized and proper medical and surgical therapy applied.

In conclusion, it may be emphasized that functional and pathological changes in the pancreas proper are common conditions and that such changes account for some of the abdominal complaints that are usually laid to a diseased gall-bladder, appendicitis, or peptic ulcer. With these facts in mind, the clinician is justified more often in suspecting the pancreas and should, therefore, utilize every diagnostic means at his disposal in an effort to determine the condition of this gland.

#### DISCUSSION

Dr. H. B. Gessner (New Orleans): In those cases of pancreatitis which seem to be essentially chronic in their etiology, Doctor Silverman has laid stress on the connection with gall bladder disease. It seems to me that is well borne out by the experience in acute pancreatitis.

I will relate a case of acute pancreatitis seen two years ago, operated on in association with Doctor Barnett of New Orleans. The patient was a middle-aged man who was taken sick one night with acute epigastric pain, rigidity and some fever. When he was seen in the morning these symptoms were somewhat severe. The leukocyte count was between 15,000 and 20,000; polymorphonuclears a little over 80 per cent. A diagnosis of acute cholecystitis was made and the patient advised to submit to operation, which he did. On opening the abdomen the gall bladder was found a bright red color, thick, and there were evidences which we expect to find after necrosis due to pancreatitis. The great omentum looked as if it had been powdered with talcum. The white appearance is explained by the breaking down of fat; as a result the glycerin is absorbed and the fatty acids (oleic, palmitic, stearic) are combined with lime in the tissues, giving that appearance. In this case the pancreas could be palpated, unevenly enlarged. We opened the gall bladder and did an ordinary cholecystotomy. Further, drains were placed by breaking through the great omentum and going down to the neighborhood of the pancreas. The patient made a recovery and had no complications. He has been under observation for two years and has had no symptoms since that time.

I wish Doctor Silverman in closing would tell us whether he has observed a case of chronic pancreatitis which he traced directly to acute attacks of this disease. I understand that writers who have seen a great many cases of the acute condition say that some of them are fulminating and that they die in a few hours. This gives rise to the idea that apparently some are fulminating, others, like the case I saw, are moderately acute and yield to treatment, and still others are essentially chronic. I would like to know whether the Doctor has seen cases of the chronic form following acute attacks.

Dr. J. E. Knighton (Shreveport): Owing to the fact that the pancreas is such an important factor in the process of the production of digestive ferments, it is certainly timely to have a discussion of the diseases to which this organ is susceptible. Great credit is due Doctor Einhorn of New York for his indefatigable efforts in bringing to our knowledge means by which we are able to secure duodenal secretions. This, of course, has led to many interesting observations. Without the development of the duodenal tube through the efforts of Doctor Einhorn we never should have been able to make the observations that we have with reference to the function of the pancreas. Through observations that have been made by this means it has been brought to our knowledge that chronic pancreatitis is much more common than formerly thought by the medical profession.

I do not believe that I can suggest anything enlightening on the subject which Doctor Silverman has presented, but I would throw out the suggestion that we be careful in our observation of patients who have had a history of infections of the biliary passages, because I believe that a great majority of infections of the pancreas, the chronic cases, come secondarily from infections of the biliary tract.

Dr. Thos. B. Sellers (New Orleans): We are indebted to Dr. Silverman for his recent study of this subject, and its presentation in this most instructive paper.

A point I think deserves emphasis is the indiscriminate removal of gall bladders instead of draining them. There has been a tendency over the country to do a cholecystectomy almost routinely, instead of a cholecystotomy. I heard a very prominent surgeon say that a large percentage of gall bladders that should be removed are not removed, and a great many that should not be removed are removed. The reason for this is that in the removal of badly diseased gall bladders many technical difficulties are encountered, while the less diseased ones are easy to remove. It is a well-known fact that chronic pancreatitis is often associated with gall bladder disease. Therefore, unless there is a definite reason for removing the gall bladder it should be drained.

Dr. Daniel N. Silverman (closing). In answer to Doctor Gessner, I have seen cases of chronic pancreatitis that we diagnosed as such that had had acute attacks of abdominal pain, but it is nearly impossible to tell whether these attacks are due to acute pancreatitis.

In cases of acute pancreatitis, as its name would signify, there is an inflammation. It is the activity of the pancreatic enzymes which enter the glandular tissues of the pancreas itself, that destroy the gland. The proteolytic enzyme is the particular one. There must be some duodenal regurgitation into the pancreas to activate the trypsin and thereby destroy the gland.

New Orleans

# Medical and Surgical Journal

Established 1844

Published by the Louisiana State Medical Society under the jurisdiction of the following-named Journal Committee.

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**SUBSCRIPTION TERMS:** \$2.00 per year in advance, postage paid, for the United States; \$2.50 per year for all foreign countries belonging to the Postal Union.

Material for publication should be received not later than the twentieth of the month preceding publication. Orders for reprints must be sent in duplicate when returning galley proof.

THE JOURNAL does not hold itself responsible for statements made by any contributor.

Communications should be addressed to: New Orleans Medical and Surgical Journal, 1551 Canal Street, New Orleans, La.

## APPOINTMENTS IN STATE MEDICINE

The medical profession in Louisiana has had much food for thought in the gubernatorial appointments to positions bearing on the public health. Newton C. Blanchard, an able and efficient public servant, who rendered valuable services to the state as Governor and as U. S. Senator, appointed the genial Dr. Irwin President of the State Board of Health, because he had carried the Parish of Bossier for Blanchard when running for governor in the Democratic Primary. The succeeding Governor, J. Y. Sanders, appointed Dr. Dillon to the same office because he carried the Parish of Sabine for Sanders. Dillon's administration of the office was so unsuccessful that Sanders had to find a man of ability. He drafted Dr. Oscar Dowling for the place, which he filled so well that three successive Governors have reappointed him. These years of continuous service have resulted in significant improvement in State Health conditions. The Charity Hospital in New Orleans, in its turn has been recently the appointment of a man to high office for the purpose of paying political debts. When

Governor R. G. Pleasant entered on the duties of his office his appointees on the Board of Administration selected for the important position of Superintendent a doctor who was handicapped by illness and who leaned strongly to the old method of Hospital administration which was discarded during Governor Hall's term of office. Fortunately, the inauguration of John M. Parker as Governor was soon followed by the selection of the present superintendent, young and able, under whom the institution is making rapid strides in the right direction.

Coming to the present time we find there are rumors afloat that Dr. Evans, psychiatrist in charge for the Hospital for the Insane at Jackson, is to be relieved of his duties by Governor Fuqua. This trained specialist has earned the good will of the sheriffs and the state by his efficient cooperation with them. It is the concensus of opinion among the psychiatrists in New Orleans that his administration has been highly successful. It appears that there are two outstanding applicants for the place, one a general practitioner in late middle life, without special training in psychiatry, the other a younger man who has recently completed his years of internship and spent a few months at Jackson under the very man whom he hopes to succeed or displace. Surely the change in either case would not be for the better. Complicating the situation is the presence of a lay manager, highly respected by all who know him. We understand it is to be the plan of the Governor to place this layman over both hospitals for the insane and to have the medical men subordinate to him. It seems clear that in the treatment of the insane, which is not appreciably by the administration of medicines but very largely through the control and direction exercised by attendant and through the influence of institutional restraint, the psychiatrist should be the commanding officer. Probably the services of a layman could be profitably employed in the capacity of a purchasing agent. But the selection of the personelle of the institution, the right to hire and fire, the general direction of affairs in such a hospital should be the duty and prerogative of the trained specialist who is at once executive and technical expert. It is our opinion that the members of the medical profession should interest themselves in this situation and endeavor to guide the chief executive of the state along the lines that make for the general welfare.

## INFLUENZA AND THE COMMON COLD

The common cold is the most prevalent illness in the United States and apparently many such colds are quite contagious, few people failing to experience at least one attack during a twelve-month period, while many persons have three or more attacks during that time. These facts are borne out by data recently secured by officers of the Public Health Service in an investigation of influenza and the minor respiratory diseases which they are conducting at the present time.

That large numbers of persons have colds each year is common knowledge but just what percentage of people, as a rule, have attacks and the average number of colds per person per year have not been known, as the disease is not required to be reported by law, and, therefore, the morbidity records do not show that information.

In a preliminary report of the investigation that is now in progress, the Public Health Service shows that, among a fairly representative group of persons, only 10 percent had no colds, while 90 per cent had one or more colds during a five and one-half month period; the rate for the group as a whole for that period being 1.9 cold per person, or an annual rate of 3.7 cold per person should the same rate obtain throughout the year.

The cold was found to be the predominant form of respiratory attack. The relative frequency of symptoms was shown to be very much the same for all localities, and the epidemic outbreaks occurred apparently at about the same time of year in each locality. An outbreak of colds usually occurred in all localities in October, followed by a decline until the latter part of December, at which time another outbreak occurred.

It is now believed that there may be a closer correlation between the common cold and influenza than was formerly thought to exist. There seem to be cases of common cold and ordinary influenza which are almost indistinguishable clinically, and the bacteriological findings in the nose and throat of influenza sufferers and persons having a common cold are as far as the evidence goes practically the same. As a matter of fact, even in health the bacteria found in the minor respiratory diseases are nearly always present, which at once suggests that good resistance provided by physical fitness is an important line of defense, since a lowered vitality and lowered resistance favor infection. We can not de-

pend upon physical fitness alone, however, as robust persons may apparently contract a cold from an infected person.

The investigation now being undertaken by the Public Health Service is the first nation-wide study of influenza and colds ever made, and the final results are awaited with much interest, in the hope that further light will be shed on these affections which yearly cause much suffering, inconvenience, economic loss, and, in the case of influenza, even deaths, and which, as far as their cause and prevention are concerned, are still comparatively little understood.

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## HOSPITAL STAFF MEETINGS

Hospital staff organizations—comparatively of recent date in this section, may, if properly managed, wield a powerful influence for good; fostered as they are by the American College of Surgeons and by the American Hospital Association, they stand for the highest and best in clinical work. The staff meetings, if devoted to actual accomplishments in the institutions, together with a study of errors of omission and of commission and of necropsies, when obtainable, are full of valuable information; if the records are properly kept and published, they make much more interesting and instructive reading than those of the average medical societies. If practicable and *when* practicable, these minutes should be published, for the benefit of those who would profit by what goes on at the meetings, to which they are not permitted, owing to not being "on the staff."

Sometime ago, the American Medical Association, in its "Bulletin," had somewhat of a symposium on "What is the matter with the County Medical Society?" One doctor said that he belongs to several hospital staffs and, by the time he attended all these meetings, he had neither the time nor inclination to take an active part in the county society proceedings. This is wrong; we believe that, in the first place, the doctor made a mistake in belonging to so many staffs, it being better to concentrate on one or two; in the second place, the hospital staff meetings do not (or should not) usurp the functions of the county or parish society, for the fields are entirely different, except insofar as both aim to promote and encourage scientific medical advancement.

We believe that these hospital staff meetings, properly conducted, are the best agents that we have in fostering good, careful work, insuring to the benefit of our patients and of ourselves.

# MEDICAL ECONOMICS

*Chas. A. Bahn, M.D., Department Editor.*

## MEDICAL ECONOMICS, VI, (MEDICAL RECORDS. PART 3)

(Continued From Last Month, Page 296)

The perfectly good time and effort devoted to useful financial records is more than justified by the benefits to be obtained by; (1) having every cent of charges, collections, investment and expense accounted for; (2) by having definite information which will facilitate a better understanding of your financial progress which is necessary to increase intelligently the quantity, quality and value of your services; and (3) by having the facts and figures necessary for the execution of income tax or other financial returns.

The average business man's successful career would be indeed short lived if he gave as little thought to the practical understanding of his present and future progress as the average physician. The principles of charging all that the traffic will bear and of hoping that the purchaser will not know whether or not he has gotten value received, are fast going out of style. An increasingly intelligent public and more keen medical competition will necessitate the successful doctor of the future giving a full dollars worth of value for every dollar accepted and actually delivering the goods. The margin of profit is yearly becoming less in the practice of medicine which means that practical economy determines more and more the difference between success and failure. The clouds of mystery and secrecy which have apparently at times enveloped medical practice are fortunately being dispersed by the sunshine of common sense and practical understanding.

The sources of our desired financial information are; (1) the patients record cards; (2) the bank deposit book; and (3) the check book. The daily records of patients may be a card, a sheet, a page of a book on which is noted the date and amount charged for each visit or service, and the date and amount of each payment, as well as each patient's monthly balance. In a small practice the patient's daily record may be used as the only record, if the above information is contained. In a larger practice, a more permanent record such as a separate cash card etc, with or without an intermediate day sheet may be advisable.

The bank book contains every business day's deposits and corresponds with and is a control on the days collections or cash receipts as recorded on the patients daily records and in the check book. It is essential that every cent of each day's cash receipts be deposited in the bank, preferably during the next banking day. The bank book should also furnish the monthly bank balance which is a control on the total cash receipts and disbursements. The check book should show the daily and monthly disbursements.

I have selected as a standard financial recapitulation medical form "Multicolumn 50-8D" because from personal experience I know, (1) that properly arranged, it can be made to contain all necessary practical financial information desired; (2) its execution requires but a few

moments daily; (3) its use does not necessitate special training in bookkeeping; (4) it can be adapted to any medical practice; and (5) the forms are inexpensive and can be purchased from any commercial stationer.

The first column on the top is for notation of each day's charges. Deductions or allowances are to be subtracted preferably on the side or below, the difference representing the principal figure. In installing this system it is of course necessary to determine the exact amount of outstanding charges. If unknown, its amount will probably give you a healthy shock.

The second column is for each day's collections or cash receipts which corresponds with the total payments of the daily patients records and bank deposits. Checks should be entered as of face value and exchange charged under miscellaneous expense.

The third column is for the daily bank balance. This represents the previous day's bank balance plus the next day's collections from which is subtracted the same days disbursements in total.

The fourth column contains the total of disbursements or what is paid out. This position is used in order that the daily collections, bank balance and disbursements may be together, which is of material practical advantage in determining the daily bank balance.

The fifth column is for the number and the payee of each check as well as any notation such as its special purpose etc., which may refresh memory when income tax time comes around.

The next three columns include a classification of disbursements based primarily on permanency and depreciation factors which are important in financial statements and tax returns. The first of these columns is for equipment, that is disbursements for more or less permanent property usually with a life of three years or more. With the exception of automobiles 25-33 per cent, the Federal Government last year I believe, held that 15 per cent was a fair average medical equipment depreciation, which means a life of six years. This includes tables, desks; typewriter; cabinets; electrical devices, except globes etc., and surgical instruments, except those of short life. The next column is for the amount of disbursement of a less permanent character, usually less than one year life. These are usually consumed in about the same amount as purchased thereby obviating the necessity of inventories other than at the installation of the system. Under supplies are included stationery, dressings, towels, electric globes, instruments of short life, postage stamps and other similar articles. The third or last column under disbursements is here called Expense which means any disbursements for which nothing tangible or material is received in return. This includes, salaries, telephone exchange, electric lights, withdrawals, taxes, etc. The last column is for special notations such as personal withdrawals etc.

Where the doctor issues less than thirty-six checks per month one page may be used for an entire month. The date and number of checks will show the day's disbursements in which they are





to be included, several checks often being written on one day. If the number of checks issued in a month are less than seventy-two it is advisable to use one page for the first half of the month and a second page for the last half of the month; and where the number of checks issued is in excess of seventy it is advisable to use one page per week which allows space for an average of five checks per day.

Both cards and books may be adapted for physicians office records. Cards vary in size from the small three by five standard office form, to the large and somewhat complicated cap sized forms of various sorts forming part of a more or less complete system as devised by the "College of Surgeons", and advertised in "The American Medical" and other journals. Record cards have the advantage of accessibility, that is records most frequently used can be most easily located, while record books have the advantage of not being easily lost.

Personally I prefer a five by eight folder card, that it is a ten by eight record folded once, thus giving the standard five by eight size for filing cabinets. This form and size has the advantage of not being too large or cumbersome and also that information is relatively easily located, as compared with the larger and more complicated record forms. With the insertion of filler sheets, all possible information that may be required in the longest and most complicated case may be noted, yet it is not too large for the simplest and briefest record.

In theory a blank record has the great advantage that all of its space is available for any information that may be desired because the component parts vary greatly in amount and ratio to each other. Printed records have the advantage that one may know where to look for a given bit of information by its classification. After a rather varied experience I have come to the conclusion that the place for examination methods is in the examiner's head and not printed on the record card. The general headings for information are; (1) administrative, containing name in full, address, number, date, age, occupation etc; (2) the patient's statement, or history; (3) the objective findings, or what the doctor actually knows as fact; (4) treatment, mental, physical and chemical, (5) progress, (6) less relevant medical information such as the examination reports of other doctors, etc; (7) the diagnosis, or the doctor's name of the sickness; (8) the financial data such as the date and charge for each service or visit, and the date and amount of each payment; (9) other administrative information such as the sender of the patient, the person to be billed for the services, the physician who may be treating the patient, the number and character of reports, etc. Each of these subdivisions should be allotted sufficient average space and if more is needed, filler sheets are used. As far as possible practical notations most frequently used should be written where they will be most easily seen.

Personally I prefer the front outside page for the first general information, name, age, address, number, etc; (2) the history; (3) the objective findings; (4) the diagnosis; the back outside page for the financial statement and administrative remarks; the inside front page for less frequently used medical information such as progress, etc., and the back inside page for less relevant information such as the reports of other physicians,

other examination reports, correspondence etc. This arrangement may or may not be well adapted for your use.

In the selection of a record system the most important things are that you understand definitely what information you wish to record and its fundamental classifications; and that you adapt to this a size, arrangement and class of record which meets your needs, remembering that simplicity is a vital factor in any thing which is used quickly and often. A system or method which may be a howling success in the hands of one man may be a dire and disastrous failure in those of another because the two require different adaptations of fundamentals. The installation and maintenance of record systems cost time and money, justified only as they prevent loss of more time, effort and money and furnish information which is more than worth what it costs.

Some prefer bound books for financial records because of the decreased likelihood of loss. Presuming a reasonable amount of care, I have found that looseleaf cards, properly filed and accounted for, are seldom lost and have the advantage that those more frequently used can be more easily located. I prefer the five by eight size for both history and cash cards for aside from other advantages they can also be filed together when placed in the permanent files.

It is generally advisable that current cards, those of patients under treatment, be filed alphabetically and noncurrent or permanent cards, of patients not under recent treatment, be filed numerically. The alphabetic filing is the simplest and best adapted for five thousand or less records. For a larger number of cards the numerical filing is perhaps preferable because certain names occur with such great frequency that it may be difficult to easily locate one of the Jones, Smith, or Brown family. Numerical filing necessitates an index book or sheet containing the full name and serial number of the patient as contained on the history and cash card. This means that the name and number must be written three times for each new patient. This type of filing is capable of indefinite expansion with the slight exception that bound record books printed for this purpose are usually limited to thirty-five thousand names. In our office history cards are kept in the current or alphabetical file until the first of the third month after the patient was last seen; cash cards, until the account has been paid. The history and cash card are ultimately placed together in the permanent file in serial order.

On the several methods of transcribing records the following may be said:

1. Ordinary hand writing has the advantage of simplicity, possible legibility, and of not requiring special equipment, but has the disadvantages of being slow, usually illegible.

2. Shorthand dictation with typewriter transcription has the advantage of perhaps being the fastest method under favorable conditions, but unfortunately these do not always exist; either the dictator does not speak fast, distinctly, coherently, or understandingly; or the dictatee does not possess the necessary knowledge of shorthand, as applied to medical terms or the coordination of brain and hand, or the familiarity with the shorthand signs, which soon become arctic in coldness. The record must also be taken out of use for the notations to be entered either directly on

the record or on paper slips and pasted in the record. In general this method is adapted only for the most experienced stenographer and dictator.

3. The dictation of records on the typewriter is apparently the most widely adaptable record method, because the record can be kept apace with the patient, assuming that it is promptly dictated and the physician can therefore use it to greater advantage. This method requires for its success a fast typist familiar with medical terms.

4. Machine dictation and typewriter transcription is apparently successful in medical records only with highly trained assistance. Medical dictating machine operators are apparently somewhat difficult to obtain and the transcription of records necessitates their being out of practical service for a time whether the notation is made directly upon the record or through the medium of thin paper pasted or pinned to the record.

The printing of the history and cash cards, daily list of patients, etc., with the exception of the daily recapitulation record, which, accompanies this installment are being omitted because of the attendant cost. Should anyone be sufficiently interested to desire further investigation of office record forms, I will be pleased to review the subject with them and to assist from my collection in the selection of the most practical system.

Next month we will discuss income tax returns, a subject which is dear to our pocketbooks, if not to our hearts.

Our efforts in trying to help you help yourselves in a practical way are not receiving enough criticism which means either you are harder to awaken than we anticipated or that our presentation is faulty. Which is it? Write us, we want to know.

Address communications to Dr. Chas. A. Bahn, 1551 Canal St., New Orleans, La.

## NEWS AND COMMENT

*Lucien A. Ledoux, M. D., Department Editor*

"Every man owes some of his time to the up-building of the profession to which he belongs."  
—Theodore Roosevelt.

### MONTHLY BULLETIN SHREVEPORT MEDICAL SOCIETY, JANUARY, 1925

January meeting of the Shreveport Medical Society, January 6th at Charity Hospital at 8. p. m.

January scientific program: Hiccoughs, by Dr. J. D. Young. To open discussion Drs. Herold, Kerlin, Bodenheimer, Douglas. Reports of other clinical cases.

#### Secretary-Treasurer Report

Durnig the year 1924 there have been added to the roll of election and transfer nine new members: Drs. H. A. Durham, L. W. Gorton, M. D. Hargrove, W. P. Lambert, N. G. Nasif, C. W. Phillips, W. M. Scott, J. W. Winn, R. C. Young.

Lost by transfer or resigned, three: Drs. D. S. Marseilles, L. C. Spenser, W. B. White.

Dropped from the roll for non-payment of dues, three: Drs. A. B. Bugg, A. D. Hatcher, C. H. Par-due.

Gained 9, lost 6, leaving net gain of three.

In the twelve months closing with last meeting there were eleven meetings with an average attendance of 37. Twenty-six members did not attend any meetings last year.

When all the checks are in and money on hand is deposited there will be a balance of \$93.94 and one fifty dollar Liberty bond.

1924 dues have been paid by all members except two, Drs. C. Blume and E. E. Simpson.

#### Election of Officers.

Dr. Ragan read the nominations of the Nominating Committee. The president entertained nominations from the floor.

Dr. Barrow made a motion that the Nominating Committee be thanked and that nominations be made from the floor. Motion seconded by Dr. Hendricks. Dr. Bodenheimer announced that such procedure would be unconstitutional. Motion lost.

Dr. Hendricks made a motion that a nominee must have attended nine meetings during the year, as was required in 1912. There arose the question as to the constitutionality of such pre-requisite since the adoption this year of a revised constitution and By-laws.

Dr. Barrow made a motion that the presence at nine meetings requirement for nominees be set aside. The motion was seconded and passed by vote of thirty-five for and four against.

For president Dr. Hendricks nominated Dr. A. P. Crain. Drs. E. L. Sanderson, John L. Scales and A. P. Crain were voted upon for President, Dr. E. L. Sanderson was elected on the first ballot.

For First Vice-President Drs. T. D. Boaz and A. P. Crain were voted upon. Dr. A. P. Crain was elected.

For Second Vice-President, Drs. M. S. Picard and F. H. Walke were the nominees. Dr. Picard being forced to be out of town at the moment.

Dr. Walke requested permission to withdraw his name in favor of Dr. Picard who was elected by acclamation.

For Secretary, Drs. D. L. Kerlin and R. T. Lucas were the nominees. Dr. Kerlin withdrew his name in favor of Dr. Lucas who was elected by acclamation.

For Treasurer, Dr. Boyce nominated Dr. J. R. Stamper. Drs. Galloway Erickson and Stamper were voted upon for Treasurer. On the first ballot, Dr. Erickson received the least votes and Drs. Galloway and Stamper were voted upon. Dr. Stamper was elected, by a majority of one.

For Historian the nominees were Drs. J. F. O'Leary and F. S. Furman. Dr. O'Leary had expressed himself as not wanting the office but being willing to help. Dr. Penick made a motion which was seconded and passed that Dr. Furman be elected by acclamation and Dr. O'Leary requested to give any assistance desired to Dr. Furman.

President Butler, who unknown to the Society was practically sick, expressed his thanks for the co-operation given him during his term of office and requested the newly elected president, Dr. E. L. Sanderson to take the chair. Dr. Sanderson, who had expressed his appreciation for the honor conferred upon him announced that there would be no change in policy, except to try to get the younger members to take a more active part and an earnest effort for the Society to be a bit more parliamentary in procedure.

For delegates nominees were Drs. John L. Scales, T. D. Boaz, F. H. Walke, D. L. Kerlin, C. B. Erickson, E. Galloway. Dr. Heath nominated Dr. Butler. Dr. Bodenheimer nominated Dr. Knighton, Dr. Penick nominated Dr. Lloyd, Dr. Kerlin withdrew his name.

Dr. Bodenheimer made a motion, amended by Dr. Herold, and passed that the highest five nominees be declared delegates and the next five alternate. Delegates elected were, Drs. S. C. Barrow, W. P. Butler, T. P. Lloyd, John L. Scales, J. E. Knighton. Alternates elected on the first ballot were Drs. T. D. Boaz and F. H. Walke. Elected on the second ballot Drs. C. B. Erickson and E. Galloway.

Dr. Ragan called attention to the fact that the President has authority to name delegates to take the place of absent delegates.

Dr. Butler made a motion which was seconded and passed that a committee be appointed to draw up an application for membership form.

Dr. Herold called attention to the necessity for getting in dues for 1925 before the first of January to get the protection in mal-practice suits which goes with paid up membership in the State Society.

Dr. Walke called attention to the Tri-State Medical Society meeting here January 14th and 15th and made a motion which was seconded and passed that an entertainment committee be appointed.

President Sanderson announced the appointment of all committees within the next few days.

There being no further business the Society adjourned.

R. T. Lucas, Secretary.

Committees for 1925.

Ethics—Drs. T. P. Lloyd, Chairman; J. E. Knighton, A. A. Herold, T. E. Williams, I. B. Rougon.

Program—Drs. R. T. Lucas, Secretary, G. A. Caldwell, W. S. Kerlin, R. G. Douglas.

Entertainment—Drs. J. M. Gorton, Chairman; C. C. Rigby, E. Gallaway.

Special Entertainment for Tri-State Society Meeting—Drs. F. H. Walke, J. E. Slicer, J. L. Ewing.

Memorial Committee—Drs. J. D. Young, Chairman; S. C. Barrow, T. R. Ragan.

### CORRECTION

In the last issue by mistake, the name of Dr. J. J. Irwin appeared as having moved to Larose, Louisiana. It should have been Dr. I. J. Boulet.

### LOUISIANA STATE MEDICAL SOCIETY.

The Executive Committee of the Louisiana State Medical Society and the Council held a very important meeting in New Orleans on January 20th, 1925, at their domicile 1551 Canal street. There was an unusual attendance at this meeting, and a great many matters of extreme importance were disposed of.

### FIFTH DISTRICT MEDICAL SOCIETY.

A meeting of the Fifth District Medical Society was held at Monroe on December 9th, 1924. In addition to having with them Drs. Allen and Seale Harris, there was present also Dr. Oscar Dowling, who had exhibited for the members the "Life of Pasteur." It was shown in the Saenger Theater, complimentary.

The following officers were elected for 1925. President, Dr. C. H. Moseley, Monroe; Vice-President, Dr. R. B. Leavell, Bastrop; Secretary-Treasurer, Dr. P. L. Perot, Monroe; Delegate, Dr. A. E. Fisher, Choudrant; Alternate, Dr. A. G. McHenry, Monroe.

### ASSUMPTION PARISH MEDICAL SOCIETY.

The 1925 officers of the Assumption Parish Medical Society are: President, Dr. T. B. Pugh, Napoleonville; Secretary-Treasurer, Dr. Charles Roger, Napoleonville; Delegate, Dr. W. E. Kittredge, Napoleonville; Alternate, Dr. C. S. Roger, Napoleonville.

### IBERIA PARISH MEDICAL SOCIETY.

Iberia Parish Medical Society on December 18th, 1924, elected the following officers for 1925: President, Dr. Geo. J. Sabatier, New Iberia; Vice-President, Dr. P. A. Boykin, Jeanerette; Secretary-Treasurer: Dr. W. F. Carstens, New Iberia; Delegate, Dr. Guy A. Shaw, Loreauville; Alternate, Dr. J. N. Pharr, New Iberia.

Dr. Wallace J. Durel, Covington, Louisiana, has been appointed Chairman of the Committee on Medicine and Therapeutics.

### ST. TAMMANY PARISH MEDICAL SOCIETY.

The St. Tammany Parish Medical Society held its regular monthly meeting and installation of officers on the 9th inst. at Mandeville, and finished off the evening with a fine banquet as ever tickled the tongue of a gourmet, at Bechac's celebrated restaurant.

It being a business meeting there were no scientific papers. Dr. R. L. Young of Covington was elected a member. Those present were Dr. G. A. Pennington, President; Dr. F. R. Singleton, Vice-President; Dr. H. D. Bulloch, Secretary-Treasurer; Dr. J. K. Griffith, retiring president and Delegate to the State Medical Society; Dr. R. B. Paine, Alternate, and Drs. J. F. Polk, C. A. Farmer, J. F. Buquoi, N. M. Hebert, B. B. Warren, R. L. Young, and A. G. Maylie.

Several invited guests from New Orleans failed to materialize.

The next meeting will be held at Covington on Friday, February 13th, 1925.

### LAFOURCHE VALLEY MEDICAL SOCIETY

The quarterly meeting of the Lafourche Valley Medical Society was held by request of the Assumption Parish doctors at Napoleonville on Thursday, November 13th, 1924, at 6 p.m. The following doctors were on the program.

Dr. S. M. D. Clark, New Orleans; Dr. Albert J. Meyer, Dr. J. L. Danos, and Dr. H. S. Smith, Thibodaux; Dr. G. A. Sigur, Lockport; Dr. T. I. St. Martin, Houma, and Dr. T. H. Hamson, Donaldsonville.

A sumptuous banquet was served after the scientific program in the Knights of Columbus Hall, prepared by the Ladies of Napoleonville, Mrs. W. E. Kittredge, of Napoleonville, being at the head of this committee.

### UNITED STATES CIVIL SERVICE.

Junior Medical Officer, Assistant Medical Officer, Associate Medical Officer, Medical Officer, Senior Medical Officer; Receipt of applications for these examinations will close on June 30, 1925. They are to fill vacancies in various branches of the Government service.

Full information and application blanks may be obtained from the United States Civil Service Commission, Washington, D. C., or the Secretary of the Board of U. S. civil-service examiners at the post office or customhouse in any City.

The Health Committee of the League of Nations, in a report to be filed with the Council of the League, a copy of which has just reached this country, announces the plans of the Committee for the standardization of anti-toxins and serums.

Last year agreement was reached on the question of the standardization of anti-toxin for diphtheria and it is expected that during the present year the tetanus serum will be standardized. The researches on the sero-diagnosis of blood disease will also be further carried on during the present year.

The Commission for the distribution of the Prize for Cancer study founded by Dr. Sofie A. Nordhuff-Jung, in agreement with the Foundress, has resolved to distribute the Prize from now on only every two years to the Double amount of the sum allotted heretofore, that is One Thousand (\$1000) Dollars. The next prize will reach distribution in 1926.

Removals: Dr. Chas. Cox, Weeks Island to New Orleans, La. Dr. E. S. Fulton, New Iberia, to Alexandria, La. Dr. C. H. Potts formerly an interne at the Touro Infirmary is now located in Shreveport, La.

#### LOUISIANA NURSES' BOARD OF EXAMINERS

The semi-annual examination of the Louisiana Nurses' Board of Examiners was held in New Orleans and in Shreveport, December 15th and 16th.

One hundred and six applicants qualified as registered nurses.

The successful applicants are:

Misses Ernestine Marie Arbour, Florence Helena Berdou, Maria Bertrand, Ann Louise Beyt, Denise T. Beyt, Willie Dee Blackwood, Adele Marie Blanchard, Myrtle Lucille Block, Annie Virginia Blunt, Lillian Mary Boley, Mrs. Mamie McGinty Borek, Annette Elmira Bourdreaux, Charlotte Marie Brown, Gladys Brown, Mrs. Sarah M. Anderson Brown, Mary Lucile Broussard, Mary Rose Callahan, Edna Margaret Capella, Alma Eliza Clark, Mrs. Marie Shelby Clark, Olye Hunter Clark, Mrs. Amanda Wiley Clooney, Harriette Bessie Corley, Rosie Curtis, Francis Pearl Dalton, Mrs. McCoy Grace Hoffpauir De Ben, Lillian Marie De Larot, Hazel Regina De Laune, Mary Catherine De Metz, Caroline De Valcourt, Laura De Valcourt, Elizabeth M. Doughty, Ruby Amelia Ehrlich, Esther Eleanor Fahrenwald, Lillie Elizabeth Faler, Mrs. Dagmar Albertsen Farrelly, Mrs. Lillia Le Jeune Ford, Mrs. Bernice May Savoy Fuselier, Mrs. Julie Gangloff, Julie Alice Garland, Leola Guess, Mrs. Mary Johanna Green, Martha Gillis, Ruth Marvin Hale, Katherine Rosamond Harper, Pearle Margaret Hebert, Viola Henley, Mildred Dobson Henning, Robbie Hicks, Kate Agnes Holmes, Alice Leone Jennings, Mrs. Edna Catherine Johnson, Myrtle Veronica Jordan, Grace Killingsworth, Eula Lea Kuhn, Ruby Jewel Kuhn, Enola Mary Le Blanc, Odette Marie Lefort, Cleopatra McCallum, Mrs. Louise Hebert McGann, Laurie Eloise Mahoney, Anna Velma Malley, Corinne Marie Meudoza, Margaret M. Mernagh, Ethel Michon, Hettie Miller, Mrs. Eva Lockett Mills, Nola Rae Moore, Leola Mae Moses, Daisy Mae Mount, Kathryn Elizabeth Moye, Emma Catherine Needham, Justine M. O'Brien, Linnie Pearl Paul, Willa Mae Phillips, Beatrice F. Pritchard, Mrs. Pearl Pevey Raby, Mrs. Mary Miller Roache, Marie Lorraine Rogers, Mrs. Claudia Topham Roussel, Bella Samuel, Ola Edna Sawyer, Vivian Elizabeth Shows, Estelle Maude Sones, Violet Sones, Bessie Martha Stringer, Frances Jewell Tillery, Vesta Winona Timm, Betty Tomeny, Estelle Rose Vogt, Deron Waldrum, Mrs. Sara Ella Watkins, Lorraine Beatrice Westbrook, Myrtle White, Jennie Bisland Williams, Amy Louise Wilson, Mrs. Frances Lona Witte, Anna Behland Word, Gladys Clara Wright.

Colored applicants: Earline Oberian Denmon,

Roberta Cornelia Johnson, Viola Jolicoeur, Katie Madeline Page, Viola Doreatha Pumphrey, Ossie Olach Reed, Aniece Enez Wilson.

The Louisiana Nurses' Board of Examiners is composed of the following members: Dr. John T. Crebbin, president; Miss Julie C. Tebo, R. N., secretary-treasurer; Dr. George S. Brown, New Orleans; Dr. Fred J. Frater, Shreveport; Dr. Robert W. Faulk, Monroe.

#### MONTHLY MEETINGS IN NEW ORLEANS

The Medical Staff meetings of Charity Hospital are held on the third Tuesday of each month, and the Surgical Staff meetings are held on the third Wednesday of each month in the Reception Room at 8 p.m.

The Eye, Ear, Nose and Throat Hospital meetings are held on the first Monday of each month in the Library at 8 p.m.

The Eye, Ear, Nose and Throat Club meetings are held on the third Thursday of every month in the office of the Orleans Parish Medical Society at 8 p.m.

Hotel Dieu meetings are held on the third Monday of each month in the Nurses' Class Room at 8 p.m.

Mercy Hospital meetings are held on the third Friday of each month at 8 p.m.

Presbyterian Hospital meetings are held on the last Thursday of each month at 8 p.m. in the Out Clinic Building.

Touro Infirmary meetings are held on the third Wednesday of each month at 8 p.m. in the Staff Assembly Room.

#### INTER-STATE POST GRADUATE ASSEMBLY CLINIC TOUR

Directed by the doctors in State District Medical Associations, this tour of American physicians to Canada, British Isles and France will begin May 17th, 1925, from Chicago.

Officers of the tour are: President, Dr. Chas. H. Mayo, Rochester, Minn.; chairman of the orientation committee, Dr. Addison C. Page, Des Moines, Ia.; Director of the tour, Dr. William B. Peck, Freeport, Ill.; secretary, Dr. Edwin Henes, Jr., Milwaukee, Wis.

The tour will extend over a period of approximately five weeks, and includes the clinics in Toronto, London, Liverpool, Manchester and Leeds. During the early part of June the clinics visited will be in Dublin, Belfast, Glasgow, Edinburgh and Newcastle. Intermingled will be visits and excursions to places of historical and general interest. The latter part of June will be spent in France, particularly attending the clinics in Paris, Lyon and Strasbourg. At each of these places provided in the tour a splendid scientific program has been prepared, with most prominent leaders in the medical profession of the various committees in charge. A series of luncheons and receptions round out a tour which promises to be of great value to those who are fortunate to be able to embrace this opportunity.

On November 14th, 1924, the president, following the unanimous recommendations of the United States Tariff Commission, proclaimed that "to encourage industries in the United States, and for other purposes," the duty on diethylbarbituric acid and its salts, known as Barbital and Barbitalsodium in this country, and which are chemically

identical with Veronal and Veronal-Sodium, be computed on the American valuation instead of the foreign valuation.

Highest susceptibility to scarlet fever exists from the ages of one to two years, according to the results of tests made with 7,700 normal persons of different ages. Results of these tests are summarized by Dr. Abram Zingher in the American Journal of Public Health.

Dr. John Schrieber, of Monroe, Louisiana, has been appointed chairman of the Section on Public Health and Sanitation for the approaching meeting of the Louisiana State Medical Society.

### BOOK REVIEWS

Diseases of the Skin, by Frank Crozer Knowles. Philadelphia, Lea & Febiger, 1923.

I know of no book of five hundred and seventy two pages on Diseases of the Skin which can compare with the book given us by Dr. Knowles; it is wonderfully complete for a book of that size and should answer to a marked degree the requirements of medical students on that subject. The illustrations are numerous, particularly good and well selected. The print is excellent.

H. E. MENAGE

Cancer of the Breast, by L. Duncan Bulkley. Philadelphia, F. A. Davis Co., 1924.

This is a very remarkable volume in many ways. The first half is a very excellent and comprehensive review of the known and suspected facts about the embryology, anatomy, physiology, pathology, diagnosis and prognosis of malignant tumors with especial reference to the breast. It undoubtedly represents wide and discriminating reading by an earnest and intelligent student. This portion may be highly recommended to anyone desiring a brief but thorough study of the subject.

The latter half, devoted to the author's conception of cancer, is the most astonishing collection of faulty logic that the reviewer has ever read. The conception of cancer as a local manifestation of a constitutional disease, is familiar enough, and no doubt as good a case can be made for it as for most other theories on the same subject. That it is a metabolic disorder is a tenable hypothesis. That medical treatment may be best for it may be possible, and that the author's treatment chiefly by diet, is of value, seems amply supported by his collection of cases. It is also true that Columbus discovered America by mistake, and that the discovery was no less important for that reason. But the author's method of supporting his purely empirical treatment by irrelevant conclusions from laboriously marshalled facts, is like a soldier armed with rifle, pistol, trench knife and hand grenade, attacking the enemy with bare fists and magic incantations. The method has been known to achieve the desired result but it offends our sense of fitness in scientific method. I believe that a logician could find here an example of every known fallacy.

For example: In the hands of surgeons, the death rate from cancer is increasing. In the hands of internists the death rate from tuberculosis is decreasing. Therefore internists should treat cancer. Sounds reasonable, doesn't it? So

does the Abram's treatment if you are not careful. Take another. In the hands of the internist, the death rate from cardiovascular disease is rapidly increasing (See any actuaries' report). In the hands of the surgeons the death rate from appendicitis has fallen tremendously. Therefore the surgeons should treat cardio-vascular disease.

Let us in fairness state, that the cases reported were carefully studied and treated, and the diagnosis well founded. The results at least as good as the surgeon's best. The author's attitude is not in any way **that of a quack**, nor does he attempt to discredit the methods to others. There can be no doubting his honesty of conviction nor the thoroughness of his study. The fact that a method is empirical does not of itself bring discredit, but it should not masquerade in the cloak of deductive reasoning.

J. D. RIVES

Cosmetic Surgery, by Charles Conrad Miller. Philadelphia, F. A. Davis Co., 1924.

A primer for face-lifters, and like most primers full of neglected though well known truths.

The author limits his work to the methods of correction of what might be called non-pathologic changes in the face and neck. It is no part of our function to comment on the desirability or ethics of this branch of surgery since it does exist and is much in demand. However, we cannot avoid observing the persistence of the surgeon's inheritance from his legitimate ancestor.

This work presupposes no knowledge of surgery on the part of the reader, and its method of presentation is so elementary as to constitute a devastating criticism of the intelligence and training of persons likely to be interested. Let it be understood, however, that one will search in vain for unsound surgical principles. There is much here that good general and plastic surgeons could learn and practice to advantage. The text is notably free from false claims as to originality as well as to overenthusiastic promises of results. The author sets forth the methods deemed best by himself with no reference to individual origins, but a very definite and clear statement to the effect that only well-known and long established principles of plastic surgery are used, the application of these principles to individual problems being varied to meet the needs of the case.

The work is a clear, simple presentation on technical method with occasional sage comments on men and manners that give a hint of the tolerant philosophy behind the pen. The field seems to be entirely covered but not in an exhaustive manner. Certainly much more extensive remodelling of noses is being done successfully. It seems probable that the author limits himself to the easily performed operations of established efficacy, though this is not stated.

The book is well bound and printed. The illustrations are diagrammatic but clear and effective. They are adequate in number and serve to illuminate the text admirably.

Hypercritical general surgeons are advised to read the conclusions (last chapter) first, and be disarmed. Tyros seeing a road to wealth will do well to ponder the concluding sentence. "So it is the suggestion of the writer that the featural surgeon should not exclude himself from the field of general surgery, for as one grows older one finds more satisfaction in doing operations which cure disease rather than those which merely satisfy vanity."

J. D. RIVES

A Review of A Text-Book of Surgical Handicraft by J. Renfrew White—New York, The Macmillan Co., 1924.

The author of this volume states in the introduction that it has been compiled for junior medical students.

Careful reading of this book will convince anyone that it is indispensable to a library for ready reference because the author has compiled and placed under one cover material which is difficult to find.

This volume should be in the hand of every medical student. A copy of it should be in the operating pavillion of every hospital, and the druggist would do well to avail himself of its use.

The chapter on asepis and antisepsis is extremely interesting, because of the medical history which it contains. In the chapter of antiseptics we find the author detailing for each antiseptic its nature, methods of preparation, use, advantages and disadvantages.

The chapters devoted to Surgical Material, Bandaging, Hemorrhage and Ligatures are of particular interest. The author begins each chapter with quotation from some outstanding medical authority. Dr. White gives a photograph and a short biographical sketch of the authority quoted. It is of particular interest to us that the chapter on Knots, Ligatures and Sutures is begun by a quotation from Dr. Matas.

It is worthy of note that the author, living in New Zealand, gives credit to so many American works on surgery for suggestions in the completion of his undertaking.

This little volume deserves to be in constant use by surgeons as well as under graduate medical students.

ISIDORE COHN

The Circulatory Disturbances of the Extremities, by Leo Buerger. Philadelphia & London, W. B. Saunders Co., 1924.

This volume is a gem in its field. The author has succeeded in contributing a volume to medical literature which should be welcomed by undergraduates of medicine, as well as those interested in diseases of the peripheral circulation.

It is interesting for the undergraduate, particularly because of the detailed description of methods of examination of cases in which there is a suspected disturbance of circulation, and because of the careful explanation of manifestations of diseases of peripheral circulation.

The chapters devoted to Thrombo Angiitis Obliterans might well form a monograph on the subject. The careful, minute, description of all of the manifestations of this disease, as well as the pathology, including histopathology is classic. This portion of the volume represents the great contribution to medical knowledge by the author.

The remaining portions of the volume are devoted to descriptions of Arteriosclerosis, Reynaud's disease, and the other important causes of Gangrene.

The differential diagnosis of each from the other is set forth in a manner that will clarify many points of doubt in the mind of the surgeon called upon to treat one of these diseases.

Since the indication for treatment in each one varies greatly from the other, every surgeon will benefit himself by careful study of this volume and at the same time he will render better service to these unfortunate patients.

This volume is one of which might be placed along side of Dr. Matas' work in vascular surgery.

As a reference work it should be near at hand for use by all.

ISIDORE COHN

Circulation in Health and Disease, by Carl J. Wiggers. Philadelphia and New York, Lea & Febiger, 1923.

The second edition of this well known work requires no introduction to students of cardiology. The physiology and dynamics of the circulatory apparatus are thoroughly covered as well as the various mechanical means of recording and studying the arterial and venous circulation. The work is highly technical and is, on that account, of value to the practitioner only as a book of reference. The author's method of exposition of the subject likewise makes it rather difficult reading for anybody but the advanced student of cardiology. Many facts and data are presented without any conclusions being drawn by the author who prefers to allow the reader to draw his own. Such a method presupposes a wide knowledge of the subject by the reader and to some extent limits the usefulness of the book to those particularly interested in the subject except as a reference work.

RANDOLPH LYONS

#### PUBLICATIONS RECEIVED

W. B. Saunders Company, Philadelphia and London: "General Index to Bickham's Operative Surgery," Vols. I. to VI. "Operative Surgery," by Warren Stone Bickham, Vol VI.

The Year Book Publishers,, Chicago: "The Practical Medicine Series," under General Editorial Charge of Dr. Chas. L. Mix, A. M., M. D., Vol. I., General Medicine; Vol. II., General Surgery.

Paul B. Hoeber, Inc., New York: "Practical Lectures, 1923-1924."

MacMillan Company, New York: "The Medical Science in the German Universities," translated by Theodor Billroth. "Parasites and Parasitosis of the Domestic Animals," by B. M. Underhill, V. M. D.

J. B. Lippincott, Philadelphia and London: "Bacteria in Relation to Man," by Jean Broadhurst, Ph. D.

Washington Government Printing Office' "Annual Report of the Surgeon-General of the Public Health Service of the United States."



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EXCHANGE  
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MEDICAL AND SURGICAL  
JOURNAL

Owned and Published by THE LOUISIANA STATE MEDICAL SOCIETY

OFFICIAL ORGAN MISSISSIPPI STATE MEDICAL ASSOCIATION AND ORLEANS PARISH MEDICAL SOCIETY

\$2.00 per Annum, 25c per Copy  
Volume 77, Number 9

MARCH, 1925

Published Monthly in New Orleans  
at 1551 Canal Street

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Next Annual Meeting Louisiana State Medical Society, New Orleans, April 21-23, 1925

Next Annual Meeting Mississippi State Medical Association, Biloxi, May 12-14, 1925

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# New Orleans Medical

and

# Surgical Journal

Vol. 77

MARCH, 1925

No. 9

## ETIOLOGY OF RAT BITE FEVER\*

### Preliminary Report

J. A. LANFORD, M. D.

and

E. H. LAWSON, M. D.

NEW ORLEANS.

In 1840 Wilcox (1) reported a case of fever following the bite of a rat which was characterized by an unusual clinical course. Because of the fact that it did not resemble any known disease, he called it rat bite fever. In 1844 Millot-Carpentier (2) described a similar case in France and other writers reported cases in various other parts of the world. Miyake (3) in 1899 first accurately described the clinical features of the disease in detail, reporting 11 cases of his own and referring to others in the Japanese literature. He applied the name "sodoku". Up to the present writing more than 140 cases have been reported throughout the world with the diagnosis of rat bite fever.

The clinical diagnosis of the disease is made from a number of important facts, chief of which is the history of a bite by a rat or other rodent, cat or dog, which is followed by only a superficial and mild local reaction. In 14 or 28 days, the site of the injury becomes inflamed, bluish red in color, painful and associated with lymph adenitis and lymph angiitis, and quickly followed by symptoms of systemic invasion. There is a chill, rapid rise in temperature to 103° or 104°F, extreme prostration, muscular weakness and at times delirium. In most instances a bluish red erythema appears on the body. In 48 to 60

hours the symptoms subside and the patient feels fairly normal, but after an interval of 4 to 6 days, there is a return of the fever and associated symptoms but to a slightly less degree. These relapses may occur at intervals over a period of months or years.

The etiology of the disease has been the subject of much study and research and in 1916 Blake (4) announced that he had recovered a streptothricial organism from a case that gave the clinical evidences of rat bite fever, thus confirming Schott-Muller's (5) work of several years previously. Because the animals inoculated with this culture became ill and ran a remittent temperature, he announced that the streptothrix *muris ratti* is the cause of rat bite fever. In the same year Futaki (6) and his associates recovered a spirochetal organism from the lymph nodes of 2 out of 4 cases of rat bite fever, and the following year publishing their observations of human cases and experimental data obtained from extensive animal researches stated that *spirocheta morsus muris* is the etiological factor in the production of the disease.

Following this work many cases have been reported in which the treatment of the disease with arsphenamin has tended to confirm the opinion of Futaki that the disease is of spirocheta' origin. However, but few of the writers attempted animal inoculations although the organisms have been recovered from human cases by Row (7) & Parmagand (8) in India and Delamare (9) in France. Recently Mooser isolated the organism from a sick rat in Mexico City.

It is therefore, of particular interest that recently a rat bitten patient was admitted to the service of Drs. Matas & Maes (in the Touro Infirmary of New Orleans) presenting the characteristic evidences of rat bite fever. Dr. G. B. Grant, interne on the service recognized the condition and

\*Read before Orleans Parish Medical Society, November 10, 1924.

"Aided by a grant from the David T. Schwartz Research Fund.

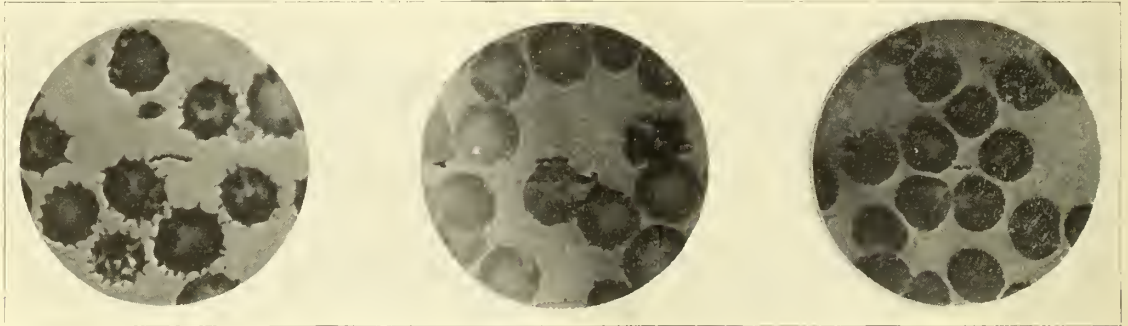
From the Laboratories of Pathology of Tulane University and Touro Infirmary.

animal inoculations confirmed the diagnosis. (This case was reported on March 12, 1924 to the Staff of the Touro Infirmary by Dr. Rudolph Matas).

On the 42nd day after the bite of the rat, during the 5th relapse of the fever there was obtained from a swollen lymph node draining the bitten area, material which was injected into the peritoneal cavity of white mice and on the 14th day following inoculation a few very actively motile spiral organisms were found in the circulating blood which answered the morphological descriptions of Futaki and others of *Spirocheta morsus muris*.

Previous to the inoculation of the mice with this material careful examinations made of stained blood smears and fresh blood with the dark field illuminator were found negative for spiral organisms of any kind in their circulation and we are, therefore, confident that the organisms subsequently found in the blood of the mice were

ceeding in a jerky manner and while it usually progresses with one end forward it can and does occasionally move in the opposite direction. In its motility it does not revolve. As it slows down as the result of the effect of the light, its movements are less rapid and at obstructions will become entirely motionless for a few seconds. At this time the organism appears as a series of white dots, 3 to 6 in number, when it is with the greatest difficulty that definite spirals can be made out. After a rest of a few seconds a somewhat serpentine movement will begin when the spirals are again recognized and the flagellae easily seen, usually at both extremities. Occasionally the flagellae will become fastened to an obstruction, at which times the organism may revolve very rapidly, resembling somewhat the tumbling motion of some motile bacteria. Finally motion ceases entirely and recognition becomes almost impossible.



SEVERAL FORMS OF SPIROCHETA MORSUS MURIS IN CIRCULATING BLOOD OF GUINEA PIG inoculated from the patient ill of the rat bite fever.

The organism is spirochetal in form, measuring 1.5 to 5 micro-millimeters in length, exclusive of the flagellae .2 to .3 microns in thickness and having from 3 to 6 curves which are rather uniform and relatively deep. It is somewhat thicker than *Treponema pallida*, tapering to pointed extremities where one or more flagellae are attached. There is no undulating membrane. In fresh preparations of the blood of infected animals examined with the dark field illuminator, the organism has a very characteristic motion. Suddenly from the edge of the field will dart a small object which moves so rapidly that its outline cannot be determined. It quickly passes out of the optical field unless arrested by a red blood cell or other structure when it will change its direction and proceed on its rapid way by a darting movement. In many respects it resembles the rapid motion of a minnow through the water pro-

During the course of the diseases the inoculated animal rapidly loses weight, becomes emaciated and weakened and cries with pain when handled. The hair becomes dry, ruffled and falls out in relatively large quantities. They run an irregular relapsing fever.

Conjunctivitis and Keratitis are fairly constant symptoms later in the disease.

Blood smears show marked variation in size, shape and staining reaction of the red cells.

A few days before the animals succumb to the infection there is interference with locomotion particularly of the hind legs and convulsions occur.

Summary:

1. Rat bite fever has been observed since 1840 when the first case was described by Wilcox.
2. Futaki in 1915 described a spirochetal organism which he recovered by inoculating white mice with material ob-

- tained from 2 out of 4 cases of typical rat bite fever.
3. Row & Parmagand in India and Delamare in France have confirmed these findings in human cases.
  4. While a number of cases have been reported as occurring in the United States, the diagnosis has been made entirely on clinical symptoms and therapeutic tests.
  5. We have recovered a spirochetal organism, which completely corresponds to *Spirocheta morsus muris* by injecting white mice with material obtained from the swollen lymph node of the human case which had been bitten by a rat 42 days previously.
  6. The organism is actively motile 1.5 to 5 microns long, .2 to .3 microns in thickness with 2-6 relatively deep curves; it has 2 or more flagellae, no undulating membrane and divides transversely. It is not difficult to stain by the ordinary dyes, being particularly well defined by the various Romanowsky methods.
  7. It is obvious that infection in man following the bite of a rat may be due to a variety of micro-organisms. However, it is taken for granted that the so-called rat bite fever is caused by a specific spirochete (*Spirocheta morsus muris*). It is probable that those cases from which streptothricial and other bacterial forms have been recovered and regarded as the causal excitant, were primarily spirochetal and became obscured by a superimposed or concomitant infection.

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### DISCUSSION

Dr. M. J. Couret: I would like to ask Dr. Lanford if he can tell us something about the method of transmission of rat bite fever and whether he has found the spirochetes during the periods of intermission?

My reason for asking is because I had occasion to see two cases of rat-bite fever (Sudoku) in Italy. One case had had two paroxysms at intervals of about a week. This man had an erythema on the arm. I looked for the organisms in both his blood and in the lesion, but could not

find them. Mice were inoculated with negative results. The case was in one of the periods of intermission.

The other patient had been bitten on the forehead and had had several paroxysms of the fever. There was an area of anesthesia on his forehead—no sensation whatever. My first thought was probably leprosy. Smears from the lesion showed no Hausen's bacilli. He had been ill for six months with periodic attacks of fever, of several days duration, and during the attacks would return to the Hospital. I saw him also in one of the periods of intermission and studied him most carefully, but could recover no organisms from his blood or from the lesion on his forehead. Animal inoculations were also negative.

Dr. W. H. Seemann: The enjoyment experienced in listening to this paper has been due largely to the fact that through the kind invitation of Dr. Lanford I had the opportunity of looking at the specimen. At that time I endeavored to run a series of rats to corroborate the presence of the organisms in the rats in New Orleans which I did not doubt existed, but could add nothing to the study, as I was unable, in a series of probably three or four dozen rats, to find any of these organisms. Yet, in looking up the literature from Japan, which has the majority of these infections, and where the rats have the infection to the greatest extent reported, they report but .3 of 1% in wild rats. Therefore one can understand why we have had so few of these cases. You can understand, the difficulty of obtaining ample literature on this subject. That the organism exists, I have no doubt, but Dr. Lanford will bear me out in saying that it is a very difficult proposition to find these organisms, and when you look at the clinical picture presented, there are very few human cases that we have seen of that character, unless we have mistaken them in the past for malaria or some other condition.

Dr. Lanford did not bring out the subject of treatment, but I believe in this case salvarsan was used, and that this is recognized as the best thing to use in these cases.

I have nothing further to say, but to thank Dr. Lanford for bringing in his report.

Dr. F. M. Johns: While statistics show that there are very few cases of rat-bite fever, it cannot be denied that there are also very few cases of rat bites, so it may be that infection is the result in each case, and is caused by a perfectly normal inhabitant of the rat's mouth and not the blood—and that the place to look for the spirochetes should probably be around gum margins in the rats blood to determine the number of infected rats in a given community.

Dr. C. Chassignac: I would like to mention an occurrence that came to my knowledge a few years ago, which will probably prove interesting. This was an attack of rat-bite fever in a patient whom I had treated for syphilis. The patient had recovered from his syphilis, as evidenced, among other reasons, by a negative Wassermann.

In this case the symptoms showed some analogy to those of syphilis. The definite organism that produces the trouble, as shown tonight, resembles that of syphilis, being an organism of the same family. The most interesting feature is that after this attack of rat-bite fever, which I learned of only subsequent to its being nearly over, the patient thought he had relapsed from syphilis on account of some of these symptoms, and examination showed a positive Wassermann. Now this might have been interpreted by some as a coinci-

dent relapse, or a return of the original disease. This was clearly shown not to be the case, for without any return to anti-luetic treatment his blood reaction later became negative again from the Wassermann standpoint. I was thoroughly convinced that he was well, and getting this story of the rat-bite and attack of fever, I attributed his symptoms to this—hence the omission of the anti-syphilitic treatment and the conclusion that the positive Wassermann was due to the rat infection.

Dr. John A. Lanford: In reply to Dr. Couret's question will say that the transmission of the disease most frequently appears to be by the bite of the grey rat, and the Japanese have succeeded in transmitting the disease to guinea pigs by permitting the infected rat to bite the guinea pig. After three weeks the guinea pig develops symptoms of infection and the specific spirochete can be demonstrated in the circulating blood. A Japanese has made a rather extensive study of the distribution of the spirochete *morsus muris* in the infected rat by impregnating tissues with silver nitrate. They are widely disseminated throughout the organisms and tissues of the body even in the skin and mucous membranes around the mouth and in the arteries.

With regard to the point brought out by Dr. Chassaing I wish to state that very frequently human cases of rat bite fever give a positive Wassermann reaction. The treatment also indicates that the disease is due to a spirochete as arsphenamine is the treatment of choice and is used in all cases. In the human case it is impossible to demonstrate the organism during the periods of quiescence, but at each recurrence of the local symptoms they can be found. The material which is injected was obtained from the lymph node draining the bitten area.

It is of interest from the local standpoint that the demonstration of the organisms in this case was the first time that they have been reported in the United States. The diagnosis of the previous cases having been made from the clinical picture following the bite of the individual by a rat. Since this case was reported in Buffalo before the American Association of Pathologists and Bacteriologists a similar spirochete has been isolated from a case of rat bite fever in Atlanta and another in Boston. This serves to show the wide spread distribution of infected rats throughout the United States.

In Japan a great number of the rats are infected and the Japanese fear the bite of a rat as much as the bite of the rabid dog and use every precaution to keep from being bitten.

The prognosis is fair. A few cases reported have come to autopsy and while the disease is interesting from the standpoint of etiology and treatment it is not a menace to the health of the community.

## WHOLE TIME COUNTY HEALTH SERVICE\*

C. C. APPLEWHITE, M. D.  
JACKSON MISS.

The effectiveness of whole time health service has been thoroughly established during the past decade. Soon after the dis-

covery of the specific causes, the modes of transmission and method of prevention of the common communicable disease, various city health departments were established for the protection of the people residing therein against the ravages of these diseases. The creation of a health department to serve a distinctly rural population is of fairly recent origin. The first full time county health department in this country was established in Yakima County Washington in 1911. Since that time this vitally important phase of health work has grown gradually but steadily. On January 1st, 1924 there were 250 such departments in operation in the United States. At present practically 12 percent of the rural population of the United States enjoy the privileges of a reasonably adequate local health service. Public health authorities are practically of one accord in the opinion that the public health can be most effectively and economically conserved through the agency of a whole time health service than through any other agency. Granted the veracity of this statement, it is imperative that the efforts of all public health agencies and health workers be so directed that the remaining 88 per cent of the rural population in the near future will be adequately served by full time health workers. The time for special campaigns against any particular disease is for all practical purposes past except in cases of epidemics, unless such campaigns are under the direction of a full-time health officer, who would be able to do the necessary follow-up work.

In the past it has been necessary to launch spectacular campaigns in order to diffuse general health knowledge among the people and create proper sentiment for health work. In this way important information has been gained and not the least important fact thus learned is that health work can most successfully be carried on through the local health department. Yet, as a result of some of these highly specialized spectacular campaigns masquerading under the guise of health work, the general public has formed an erroneous opinion of the cost and value of a well balanced and well rounded health service. It is not the purpose of the writer to discredit those agencies now engaged in specialized activities, but in his opinion the time is opportune to focus the attention of all health workers on that one method which has already proved its merit and is destined to become the accepted method within the next decade. Demonstrations in practically every line of health work have been made, and

\*Read before the Mississippi State Medical Association, Jackson, May 13-14, 1924.



the results accomplished are available to health workers. The pressing need of the day is not more demonstrations but a practical application of the demonstrated public health facts among the people through full time local health service, by means of which it can be most economically done.

Public health is a business and the general public must be brought to realize that it demands business like administration. To successfully conduct a public health program the manager or director must have certain definite clear cut qualifications. The law of this State requires that the health officer be a graduate physician trained in health work. Broad knowledge of the subject is essential. Ability to convey this knowledge to the general public in such a manner as to secure definite active co-operation is necessary. Enthusiasm tempered with patience and cool judgment, and the ability properly to evaluate the essentials of health work are prerequisites for success. The health officer must be able to visualize health problems from a community viewpoint rather than from an individualistic aspect. Zeal to be of real service to mankind rather than mercenary gain is the fundamental characteristic of the successful health officer. One endowed with the aforementioned qualifications and who is amply supplied with common sense and a willingness to work may expect to succeed in the public health field.

The general public in the future must be impressed with one very important fundamental fact,—namely, that health work to be effective must be placed upon a permanent basis and that the service must be continuous. The people must be brought to realize that it is just as reasonable and as much of the county's duty to expend public funds for the protection of the general public against the ravages of microscopic criminals as it is to pay for police protection. To accomplish worth while results in health work a period of several years of continuous work is absolutely necessary. The sooner all public health workers and those interested in public health work realize this fundamental fact, the more promptly will a constructive common sense health program be executed.

That state health department is most efficient which renders a real public health service to the greatest number of its citizens. To render this service, it is necessary to establish close contact with the people. This continuous contact can be effected both thoroughly and economically through a properly functioning full time

local health organization. In the future the efficiency of a state health department will be measured not by size and activity of the central organization but by the percentage of people who are adequately served by local health workers. This fact seems so perfectly obvious that further discussion is deemed superfluous.

A full time county health department may be defined as an organization consisting of one or more individuals who devote their entire time to the business of preventing diseases and promoting health among the people of a county. The number of personnel employed in such an organization is limited only by the willingness and the ability of the people to pay. A reasonably adequate health service may be rendered in the average county by a health officer, one sanitary inspector and one public health nurse. Some counties are amply able to maintain a larger working force while others without outside assistance would do well to employ the services of merely a whole time health officer.

The logical procedure in the organization of full time health service is to begin with the full time health officer and around him as a nucleus gradually develop the department. The health officer should be allowed ample time in which to survey the various public health problems of the county and to get himself properly oriented before additional personnel is employed. He will then be prepared to direct the members of his staff with efficiency, the department will be spared a considerable amount of lost motion, and a real financial saving will be effected. From such a beginning it is reasonable to expect, provided proper service is rendered, that the organization will gradually grow according to the needs of the respective counties. Due caution, however, should always be exercised to prevent the organization from becoming top-heavy.

The nature and amount of work that is to be done by a county health department will depend upon the particular health problems and the number and type of personnel employed. The program should embrace in a modest way all of the major public health activities, special emphasis being placed on those problems that are most important and also most amenable to thoroughly established remedies.

In a short paper it is impractical to enumerate all of the duties which a health officer is called upon to perform, yet a fairly comprehensive idea of the scope of the

work may be obtained from the following outline.

1. *Education.* Public health work is fundamentally an educational process and its success depends largely upon the effectiveness of the educational program. Public health education to be effective must be in a measure elementary,—must be practical and be based on common sense. By means of public lectures, illustrated and otherwise, personal talks, newspaper articles, pamphlets, motion pictures and all other practical methods of transmitting information, the health officer must teach the people the sources, the modes of transmission, and the methods of prevention of the communicable diseases and stimulate them to make practical application of the knowledge thus obtained. It is imperative that great stress be placed upon this phase of the work during the first year of operation.

2. *General Sanitation.* It is the health officer's duty not only to inspect all schools in regard to lighting, ventilation, water supply and methods of excreta disposal but to obtain a correction of any unsatisfactory conditions, discovered by such inspections. He should see that all food vending or producing establishments comply with the accepted standards of sanitary practices. He should make surveys of all municipalities and other centers of population within his jurisdiction to determine the safety of the water supplies, the methods of excreta disposal and the possibility of mosquito breeding, and recommend to the proper authorities suitable methods for correcting the existing evils and supervise such corrective work. In short, his manifest duty, is to create or cause to be created a healthful and wholesome environment in which the people of the county may live.

3. *Control of Communicable Disease.* The original purpose for the creation of a health department was to control the spread of communicable diseases. Any health department which fails in this phase of the work is not functioning properly. The control of contagion can be effected by (a) securing accurate reports from physicians; (b) general sanitation; (c) strict isolation of cases and bedside prophylaxis, quarantine of contacts and immunization by means of vaccines and sera. It is clearly the function of the health department to administer smallpox and typhoid vaccines, anti-rabic treatments, the Schick test, and diphtheria toxin-antitoxin. It is merely an effort to keep well people

well and cannot in the least be regarded as an infringement upon the rights of the general practitioner.

4. *Child Welfare Work.* The necessity for intensifying the program which has for its purpose the conservation of child life and consequently the development of a sturdier citizenship is perfectly apparent to anyone who is passingly familiar with this phase of the work. Medical examination of school children is an important function of the health department. It is quite an aid in the prevention of the spread of communicable diseases in a community. The health officer should strive to find those physical handicaps which are likely to interfere with the growth and development of the school child, notify the parents or guardian of the existence of such defects and endeavor to induce those responsible for the child to have the necessary corrections made. When the health officer shall have done this, his responsibility in the matter ends. The actual corrective work is a duty that must be taken care of by the medical profession of the county. It is clearly a professional responsibility. Not the least result brought about by medical school examinations is the education of the growing child in the fundamental principles of personal hygiene and consequently the formation of correct health habits.

5. *Laboratory.* Quite a diversity of opinion prevails relative to the role that the laboratory should play in the local health organization. The writer is firmly convinced that in most counties in this state, the expenditure of large sums for laboratory maintenance is unwarranted. Every public health department should be equipped to make examinations for the detection of malaria, typhoid fever, tuberculosis, intestinal parasites and diphtheria. Where possible it is wise to make milk and water analyses. Unless due care is exercised the local laboratory will likely become the proverbial "tail that wags the dog."

In addition to the foregoing, it is clearly the duty of the full-time health officer to co-operate with all agencies which have a public health item in their general program and correlate, insofar as possible, all their respective activities with the view of making the general health program in his county most effective.

From this brief outline of the health officer's duties it can readily be discerned why the word "whole-time" was placed in the title of this paper. Of course, it must

be realized that everything enumerated cannot be brought about synchronously. But, by continuous, persistent effort, this program can be executed.

6. *Results.* Efficient public health work will be manifested by a reduction in both the incidence of acute contagious diseases and also, in the general death rate. As an illustration of the effect of full-time county health service upon both the morbidity and mortality rates a few examples will be given.

The results obtained by the full-time health service upon the general death rate in Coahoma County are very striking. That county has a population of approximately 40,000. The average annual death rate for 5 years prior to the inauguration of full-time health service in 1920 was 20.5 per 1,000 population. The average annual death rate for the past four years has been 15.3 per 1,000, and for the year 1923, it had reached 13.4. This simply means that there were about 200 less deaths per year or about 800 less deaths in the county since the inauguration of the work. Placing the monetary value of a human life at the meager sum of \$1,000 and crediting the health work with only one-fourth of the deaths prevented, it is readily seen that full-time health service has saved the county \$200,000. The total cost for maintaining the service for four years was approximately \$40,000. The investment of \$40,000 to obtain such a dividend certainly appears to be an excellent business transaction. It is reasonable to expect that the results which have been accomplished in Coahoma County can be duplicated in practically any other county within the state.

The results in producing a reduction in the incidence of particular diseases can be strikingly illustrated by the following examples:

As a result of the special campaign conducted in Bolivar County by the health officer against diphtheria among the white people, that disease has been reduced from an annual average of 100 cases to 31 cases. As a result of a thorough sanitation and vaccination campaign in Marshall County, typhoid fever has been reduced from an annual average of 83 cases to 6 cases. Harrison County now enjoys the distinction of having the lowest malaria rate of any county within the state. This has been brought about since the establishment of full-time health service in that county. It might be of interest to note that the topography of this county is ideally suited for

the propagation of the Anopheline mosquito.

The State Board of Health, through its educational campaign, has awakened the general public to the needs of health work. The desire for some type of health work is manifested by the fact that all of the non-official public welfare organizations have incorporated a health item in their general programs.

The public is eager for this service and it the duty of the medical profession to continue to lead in this vitally important field. Let this awakened public opinion be crystallized into the establishment of efficient whole-time county health services through which the measures essential for the protection of the public health may be applied in a logical sequence and in proper relation to one another. When this shall have been done the different agencies will discontinue working at cross purposes, the medical profession will be subjected to a minimum amount of irritation; the appropriating agencies will be inspired with confidence and will grant adequate appropriations; the attitude of the people towards public health work will be strengthened, and public health work will be accorded its merited place in the governmental affairs of the county.

#### DISCUSSION

Dr. R. N. WHITFIELD (Florence): Doctor Applewhite read this paper to me the other day, and I could find no opening for discussion. I wish to say, however, that owing to the generosity and good nature and sympathy, perhaps, of our executive secretary, who was in office in 1910, I was put out in the field to round up some of the hookworm campaign work over the state and it gave me a great opportunity to observe the public health work in its beginning in this state. I would say that was the beginning because then one could preach health doctrines to the people where they had had very little preached before. And it is a matter of record that the people needed this preaching very much. In Jeff Davis County when I was doing my best against hookworm I was pointed out as the agent of some shoe house because I advocated that the people put shoes on their children to prevent hookworm infection. In Forest County I found every man, woman and child taking a patent medicine, Quaker herb extract at \$1.00 a bottle, and some of the leading citizens had bought six bottles for \$5.00. We marvelled at the incongruity of the situation because they would not even take our hookworm treatment, although it was free, and was what they really needed. I mention these facts because our peo-

ple in that day were not really prepared to receive the public health doctrine, and I am glad to see that this sentiment has to a great extent changed. The health officers co-operated with me splendidly then, and the doctors, too; but now we are in a new age, we have reached the stage in our work in Mississippi where we have a broadened vision of health needs. We have reached the point where I think each county should have a full-time county health officer, and that has been my prayer all the time—that every county in Mississippi would have this kind of service. I certainly agree with Doctor Leathers and others of our staff in saying that this work must be done by the counties instead of by the State Board of Health. We are most anxious to see competent men in charge of these county organizations and gradually build them up until they will have all the assistance they need in the way of nurses and secondary instructors. I realize that some counties are not able to afford a full-time health officer, but small counties could join together and have a health officer for two or three counties.

I want to say to you gentlemen with whom we have to deal that we certainly appreciate your co-operation in our work in the Bureau of Vital Statistics. We are doing this: We send to all mothers of babies one of these certificates. If a mother does not get one of these certificates in a reasonable time she will write to the Bureau, because her neighbor has one for her baby. We look it up and probably find that her baby is not registered. Then we write back to her, and she goes to see her doctor. So it will not be necessary for us to get after you doctors for not registering babies. The mothers will do that for us.

DR. WHITMAN ROWLAND, JR. (Oxford): I hardly know from what angle to discuss the paper, as my particular interest is in the practice of medicine. I cannot discuss it from any angle other than my relation as a practitioner to the public health worker.

I have found in talking with the various physicians actively engaged in the practice of medicine that there has been at times a little feeling of resentment along the lines of certain things done in public health work, particularly vaccination against typhoid fever by public health nurses, and the injection of toxin antitoxin immunization in certain cases. I personally have never found anything to criticize in that. My work I feel has been helped by the county health workers, particularly the health nurses. Some five or six years ago we had extreme difficulty in giving hydrotherapy in cases of typhoid fever, but through the educational work of the nurses it is more easily done now and in other ways there has been carried on a system of education which has been of particular value to me in general practice.

It seems to me that the success of the entire health program is definitely based upon the unit, and the success of public health work in Mississippi will most certainly be based upon the county health unit. While we have no all-time county health officer in my county I am familiar with some of the difficulties our health officer has to face, and I feel sure that a man can better serve the interests of the community by devoting his whole time to that particular line of work.

## SPEAKING OF CESAREAN SECTIONS\*

LOUIS CRAWFORD, M. D.,

PATTERSON, LA.

We are all of us more or less familiar with the history of Cesarean Section, the very stormy voyage it has had to travel, till even now it does not justly deserve the adverse criticisms which it usually calls forth.

I came not here to unearth Julius Caesar. He may, or may not have been given his start in life in this way, but I do come here to advocate an earlier recognition of cases in which delivery through the pelvis is fraught with too great danger to mother and child.

There are several outstanding improvements in technic which have helped give Cesarean Section its proper place in alleviating suffering, nay, even giving life to not only one but two. There are few operations which can lay claim to this distinction.

First to Porro should the credit be given for making this operation justifiable on the living. He with his technic, aimed at both bleeding and infection, both of which had played such havoc in the earlier days, when operation was only done on the dead mother.

Second, Sanger, who in 1882 advised suturing the uterine walls, thus doing away with sacrificing the womb, and establishing a conservative method as against the more radical Porro procedure.

Thirdly, the extra-peritoneal route as first advocated by Frank, later Thomas and a host of others. I have had no experience with this method, for frankly speaking, given a case of known infection, with fever, foul discharge, etc., it would seem to me the better plan to perform a modified Porro. The only advantage of the extra-peritoneal is that it saves the uterus, but in known infections this advantage is more than lost by the high mortality from puerperal infection. So that in cases of general virulent infection personally I believe the chances given by the intra or extra-peritoneal routes, or the Porro, are none too good, and that in all probabilities the woman will die, so another method should be resorted to for emptying the uterus.

Perhaps we have not as yet devised the best method of performing Cesarean delivery, be that as it may, we have enough methods to choose from, but we are sadly lacking in foresight in the handling of

\*Read before the Louisiana State Medical Society, Opelousas, April 23, 1924.

some of these cases, it should follow that with our experience in some tragic pelvic deliveries, cervical incisions, forceps, with their high percentage of stillbirths, cerebral hemorrhage, depressed fractures, broken bones and even necks that we would and should be a little more willing to "abuse" Cesarean Sections.

Well, I remember one morning in 1905, the old Amphitheater at Charity Hospital was all bustle, every seat was occupied, some were standing, the pit itself would hold no more, there were plenty of assistants. Why this gathering? Dr. Lewis was scheduled for a Cesarean Section. I do not remember the indication, but I am sure it was clear cut, most probably some well established contracture. Every one took his place, there was haste, and when the fetus was delivered, twenty arms were outstretched to take the child. Now no such glamour surrounds a Section. We have accepted this operative measure, well established, thanks to aseptic surgery.

It was not many years after this, I should say about 8, that one day I met the late Dr. Kohlman in the hall at Touro. He was all wrought up about a scheduled Cesarean Section to be performed by a young enthusiast. He said to me: "He must think the Lord meant for them to come out that way." This well illustrates the inevitable swinging of the pendulum in all things that are worth while.

Now we are confronted with the bare and appalling facts that next to Tuberculosis comes childbirth in maternal mortality. That from 16,000 to 20,000 women die annually in the United States, and that the maternal mortality and morbidity have practically remained unchanged in the last 10 years. Puerperal sepsis comes first in this toll, then eclampsia, then the long list of undiagnosed and mismanaged cases. Ninety per cent of all pregnancies need nothing but advice and general supervision, and they terminate successfully, but it is in the remaining 10 per cent that abnormalities are found if intelligently looked for.

The rural districts are the ones that suffer most, practitioners are scarce and they are kept far too busy covering large territories, the compensation received is ridiculously small, the young trained men are shunning the country, hospital facilities are often wanting. These are only some of the obstacles in our way for lowering this mortality.

I am not championing the cause of early indiscriminate selection of Cesarean Section, but I do urge a more liberal attitude

to its acceptance in a great many cases in which forceps and version offer less than a reasonable chance of success.

With your kind permission I would like to report the 26 cases I have performed, the number, certainly no great amount, should cause no criticism, with the indication for their performance I hope to bring out some lively discussion. It is so much easier to look backward, not always is so pleasant a recollection brought up. I have in mind three forceps cases, that had we chosen Section we would not have had two stillbirths and the other mother and child saved only by a small margin.

I would safely wager that in this audience each and every one of you have had one or more cases whose ultimate end has made you sorry a Section was not advised. Should this be true, don't you see what potent factors we will become in the lowering of this mortality, if there is aught in experience as a teacher?

### 1. *Fibroid Tumors of the Lower Segment of the Uterus. One Case.*

This woman was allowed to go into labor, for in some instances a tumor which seemingly blocks the passage will, when pains are established, be drawn out of the way and the labor will proceed with perhaps some slight interference to uterine contractions. This poor unfortunate woman had pulmonary tuberculosis also, so a quick conservative section was done rather than an operation aimed at the radical cure of the uterine condition. She lived 2 years.

### 2. *Exostosis. One Case.*

This woman was well advanced in labor when seen, an examination revealed very little dilation and two distinct exostoses, which seemed to spring from one half an inch on either side of the symphysis. Unfortunately no X-ray was obtained in this case. Steps were taken to prevent further pregnancies. She might easily have gone on and nothing serious happened other than some injury to the maternal soft parts, but we felt that this was a chance that should not be taken.

### 3. *Other Pelvic Contractures. Four Cases.*

One was a distinct "Don't-have-to-examine-me Rachitic Flat Pelvis." Two, in which the true conjugate was 8 centimeters, in one of these a previous Cesarean had been done, the other had been long in labor with no engagement at all. No impression of the head in the pelvis could be made as recommended by Muller.

The fourth of this type is a very interesting case. Two years previous she had a forceps delivery while in the Presbyterian Hospital. The child was stillborn and she an invalid for months. With this history, I did a section, and she had the stormiest time with an acute dilatation of the stomach it has been my misfortune to witness. She flatly refused the gastric lavage and as sometimes happens, got well by the grace of God. The interesting part of it is that she again

came for delivery, and this time flatly refused another Cesarean Section. She had a long, slow and hard labor. I was expecting and prepared for surgery in case of a rupture. With help with low forceps she came through, but no parents would be proud of the shape of this child's head, this has been two years, and it is still out of shape, and I believe the little rascal will have to have hats made to order.

#### 4. *Postero-Occipito with Probably Some Slight Contracture. Two Cases.*

In one case there was moulding and some engagement, forceps had been applied with, I should judge, no little traction. I did a section with an uneventful recovery for both. The other case had had a stillbirth from forceps, and a very large child, too. This woman clearly showed the discrepancy between the outlet and the large head. So, on this delivery, knowing these facts, and realizing, too, that usually the succeeding fetus, if anything, certainly is as large or even larger than the previous one, I performed a Cesarean. This woman had practically been expecting a child counting her two pregnancies some 18 months and to risk cheating her of the best chances was I considered out of the question.

#### 5. *Elderly Primipara. One Case.*

A woman 37 years old who had made no progress in several hours, I think, that these cases are justifiable, because repeated pregnancies are not the usual thing, and for this reason a long tedious labor with its dangers to the child should be avoided.

#### 6. *Placenta Previa. Four Cases.*

The maternal mortality in this condition is usually placed at 35 per cent. When these cases occur in women near term, with *os* I think that a section is clearly indicated. When the initial bleeding occurs before the child is viable, and therefore small version or the bag dilation is the better procedure. Three of these cases were complete or nearly so—one in a multipara near term with a very rigid *os*.

The fourth case was one I saw in consultation with Dr. Smith, of Franklin. She was a young robust primipara, who had had several very sharp hemorrhages. The *os* was small hard, and she was at term. We both thought that another hemorrhage would furnish the last straw, and even though we thought the child dead, we selected section as offering the least amount of shock and hemorrhage. Our fears concerning the child were well founded, but she weathered the storm.

#### 7. *Toxemias. Ten Eclampsias, Two Acute Nephritis. All Primipara.*

These are the mortality makers, and these are also the cases which answer to pre-natal care. But unfortunately this care can only best be practiced in cities, the rural districts are hard to supervise, and still harder to educate. Here our best efforts should be bent, for I think that we have an unlimited, fertile field for improvement.

Of the two Nephritic cases, I performed Cesarean Section on one at 8 months, with local anesthesia, and both mother and child did well. The other I did with a general anesthetic at term, and I believe this was an error in judgment,

for the mother survived only a few hours, the child, however, doing well. She had been in labor for a long time, and notwithstanding the presence of dilatation there was no descent. I am confident that had I used local her chances would have been better.

I have had no experience with the Strognoffe conservative treatment in Eclampsia. I have not been able to get away from the rapid emptying of the uterus and I believe that in primipara near term with a rigid *os* this should be done and done early if we would also help the child. In these 26 cases, 2 mothers were lost, one in Eclampsia and the other in Acute Nephritis. Four fetus were lost, three in Eclampsia and one in Placenta Previa.

A word now concerning operative technique, the underlying principles are so well established, I think it matters little whether the uterus is delivered before invasion or not. Personally, I don't deliver the uterus. There are just a few points I wish to emphasize, first I see no necessity for the mad haste one sees in performing this operation, one would think of the pre-anesthetic days when speed was deliberately acquired and considered such an asset to the successful surgeon. The time to hurry is when the uterus is incised. Again, I think it most important to make the incision in the uterus large to prevent ragged tearing when the child is delivered. Now, a point of great importance I think is to leave a patulous *os*. You want drainage. This can be done from above or below as thought best. The old slogan of "Once a Cesarean always a Cesarean," I am not in accord with. Five of these 26 cases have subsequently had normal deliveries.

Emergencies, the mere mention of this word is terrorizing. So many times the small fire extinguisher is unable to quench the spreading flames, so it is in Obstretical Surgery, our means in an emergency become far too limited. Let us try at least to cut down this type in Obstretical Practice, which so magnifies morbidity and mortality.

#### DISCUSSION

Dr. Joseph A. Danna (New Orleans): The trouble nowadays is, or until recently has been, not that we are not doing enough Cesarean sections, but that we have been doing too many, and until the effect of the staff meetings in the various hospitals as laid down by the American College of Surgeons has had an opportunity to be felt, Caesarean sections, at least in New Orleans, are being done much more frequently than should be. I am sure if we take the records of Hotel Dieu they will show that we are not doing one-third as many Caesarean sections as before.

The keynote of Doctor Crawford's paper, as far as its title is concerned, should be that the practitioner who takes an obstretical case should consider he has a serious proposition on his hands, should treat it as a serious thing from

the first moment that the woman comes to him to engage him to deliver her. If he makes a thorough examination when she first comes he may find there are reasons for doing a Cesarean section when the time comes. If he follows the case through he will probably be able to see that the patient with a slightly narrowed pelvis does not go to full term. He can also watch for signs of eclampsia and bring about delivery before that time. In other words, the man who carefully examines his cases and watches them from the beginning can avoid many of these cases.

Dr. C. C. De Gravelles (Morgan City): I am in perfect accord with Doctor Crawford, and I believe that many lives could be saved, especially babies, if Cesarean section were more often resorted to. Of course, this applies to sections where a good hospital and a good surgeon are available. It has been my experience that Cesarean section is far safer than high forceps in the primipara. I suppose some of our prominent obstetricians and surgeons will ridicule me for taking this stand, considering the exceedingly small number of cases I have had. In the past few years I have referred to Doctor Crawford eleven cases of primipara in which I believed Cesarean section was indicated. Doctor Crawford operated on nine of these cases. As a result we have nine mothers and nine babies, all living and well. In two of these cases it was decided to try high forceps. Unfortunately, we lost both of these babies. I suppose that some of the obstetricians will say that the country doctor does not know anything about applying forceps. That may be true, and, if it is, so much the more reason for referring our cases to a good surgeon.

Dr. T. J. Fleming (Mansfield): I have had fifteen cases of Cesarean section, twelve without a death. One of the deaths was a negro woman that a couple of doctors brought in from the country. They had been all night trying to deliver her. I did a Cesarean, but she died on the seventh day from infection.

The point I want to bring out is that if you do Cesarean section it should be done before the patient is subjected to too much examination; after she is tampered with you are liable to get infection.

Dr. S. J. Couvillon (Moreauville): In my practice of twenty years it has been my unpleasant duty to do, or rather to assist, in a Cesarean section, and that was done in the rural districts, away from hospital advantages and the various other disadvantages that Doctor Crawford has spoken of in his paper. I was called to see a primipara, 35 years old, during the hot season of August. I worked with her all night and until daybreak. I called an assistant and we tried forceps, but it was impossible to deliver her. Therefore, I deemed it expedient to call for a third man, and we first thought of performing a craniotomy in order to save the mother, who was exhausted, as was her physician, but that phase of the situation was not feasible. Finally, we decided on a Cesarean operation. In a very short time we gathered our instruments and materials, got her into a well-lighted room, stretched a bichloride sheet over and on a dinner table, placed the poor woman under an anaesthetic, and in forty minutes afterwards the operation was completed and the woman safely placed in bed. I'm happy to say that both mother and child are now living. While I expect whenever occasion demands to advise such a procedure, I certainly

am not anxious for those cases, particularly under such unfavorable circumstances.

Dr. A. A. Herold (Shreveport): I do not think there is anything that requires more judgment on the part of the obstetrician than whether Cesarean section should be done. I want to relate one case. A woman came to me who had lost two children, one by high forceps and one by craniotomy. She wanted to know what could be done. I told her if she became pregnant again to keep accurate account of any dates and keep in touch with me. She did, and twice I brought on labor three weeks ahead of time, and she had easy times. She is now happy and has no scars from any Cesarean section, and has two fine children.

I believe that if obstetricians would watch their cases Cesarean section could be often avoided where clearly indicated later.

Dr. Thos. B. Sellers (New Orleans): Dr. Crawford brought out some very interesting and instructive points in his paper. I do not think it is possible to lay down clean-cut rules as to when an abdominal caesarian section should or should not be done. Just like any other surgical problem, much must be left to the judgment of the surgeon. After repeated vaginal examination, such as are ordinarily made in homes, there is a contraindication to an abdominal caesarian section. Other methods of delivery should be sought—version, pubotomy or even craniotomy. Routine rectal examination will overlook the danger of infection and make possible the performance of an abdominal caesarian section with safety many times when it is indicated.

Dr. C. M. Horton (Franklin): I am not a surgeon. I am not an obstetrician, but in a fairly large obstetric practice as general practitioner I am very much interested in this question. The demand has been in the last few years that the obstetricians and the profession generally do something to relieve suffering as far as may be possible. You are all more or less familiar with the so-called "Twilight Sleep," which had its vogue and has largely passed into disuse. I am so often reminded of Doctor Lewis' oft-repeated injunction not to interfere, saying it was meddling obstetrics, meddling midwifery. But I believe the day has passed when a woman should be allowed to drag out a period of labor for three or four days. The profession should do something. If we are going to be obstetricians and doctors instead of midwives, we should do something. I have seen a number of cases in which high forceps left the mother mutilated and the child dead. I have seen those cases in which, while the indication was not clear for Cesarean section, I regretted exceedingly after high forceps that there had not been a Cesarean section done.

The point I seek to make is that we general practitioners, who do most of the obstetric work, see to it that the method which will conserve life of the mother and the child shall be used.

Dr. C. A. Gardiner (Sunset): I have been a general practitioner for twenty-seven years in one neighborhood with a record of 1,200 deliveries. I can recall five distinct cases that I consider could have been classed as absolutely necessary for Cesarean section, both for the sake of the mother and the child, particularly in three cases where the lives of the mothers might have been saved. In some cases Cesarean section could be used with great benefit to mother and child.

Dr. Louis B. Crawford (closing): Given 100 women, 90 will go to normal labor; ten will have some trouble, and that brings up the mortality.

My plea is for better diagnosis. In no class of surgery is judgment of more value than in obstetrics. Good judgment is the thing; you cannot lose sight of that. You cannot have dogmatic rules in these cases.

## HEALTH AND SANITATION IN HARRISON COUNTY\*

DANIEL J. WILLIAMS, M. D.,

GULFPORT, MISS.

### *Early History*

Harrison County is one of the coast counties with Biloxi River on the east, and Wolf River on the west, with an average elevation of twenty feet from the coast back for about ten miles, where the elevation increases to an average of forty feet, and is slightly rolling. Top soil, a sandy loam with sand-clay subsoil, has an area of about 570 square miles, and an urban population of 27,000, a rural population of 8,000. Being the middle of the three coast counties, an almost equal distance from Mobile, New Orleans and Hattiesburg, traversed east and west by the L. N. R. R., and north and south by the G. & S. I. R. R. Also by the Mississippi Valley, the Jackson and Magnolia Highways and the Old Spanish Trail, with five coast resorts, towns and cities, we are admirably situated for the introduction and spread of contagious diseases.

It was this place, with the birds fluttering and singing among the moss-covered boughs of the stately oaks, over-hanging the waters edge of our beautiful rivers, lakes and sounds, which attracted our early explorers, more than two and one-fourth centuries ago. We read in Riley's History of Mississippi that the early settlers led by De Iberville dwindled and suffered from many hardships and sickness. Other records show this sickness to be yellow fever and malaria.

With advantages recognized then and known to be unequaled anywhere, the country has not made the progress it should, and has remained undeveloped from one cause—sickness. Our early settlers brought with them, yellow fever, malaria and hookworm. Yellow fever continued to make its periodic devastating visits until its mode of transmission was discovered.

Malaria and hookworm remained with us—sapping our physical strength and rendering us unfit. No efforts were made to control these diseases or conditions in a section so favorable for their continued existence and spread. With a ruined country of panic stricken people, following the yellow fever epidemic of 1878, the medical profession of the Coast Counties called a meeting at Biloxi for the purpose of studying and devising a way to prevent a repetition of the disaster through which they had recently passed.

Among those present at the meeting, and the essayist of the occasion was Dr. S. A. McInnis, of Moss Point, a man of unusual mental endowment, and by nature a student and scientist. He advocated and used at this time crude creosote as a preventative for yellow fever. This was the first health step in Harrison County. In spite of diseases and disasters, ambitious young doctors continued to visit and locate along the coast. Among them we find Drs. Tacket and Folks (yellow fever playing a part in the destiny of these men). In 1898, Dr. Folks became editor of the Mississippi Medical Monthly, and through its columns advocated health measures, now practiced throughout Mississippi. For years he was our constant champion pleader for and teacher of a rational educational public health system. This association owes to him more than a debt of gratitude. Notwithstanding the activity and force with which he presented this cause, it took a long time for both the medical profession and the laity to appreciate and put in practice his ideas. In 1908, the State Board of Health began a campaign of health education. A series of lectures on hygiene and sanitation were delivered by Dr. Fred J. Meyor, of Opelousas, La., under the direction of a committee appointed by the State Board of Health. The first lecture delivered by Dr. Meyor was at Wiggins. The selection of this place for beginning the series of lectures was due to the activity of Dr. Walter H. Roan, who was then a private practitioner at Wiggins, and County Health Officer. Following the delivery of the lecture at Wiggins, within the next few days, Dr. Meyor lectured at Biloxi, Gulfport and Pass Christian. This was the beginning of a state-wide campaign of health education, and was the first to be conducted under the auspices of any State Board of Health in the United States. At this time the Mississippi State Board had less than \$900.00 to be used in the campaign. The work was made possible by the

\*Read before the Mississippi State Medical Association, Jackson, May 13-14, 1924.



fact that Dr. Meyor made a personal sacrifice, and Capt. J. T. Jones, president and owner of the Gulf & Ship Island Railroad, placed Dr. Meyor on the payroll of the G. & S. I. R. R. Co., making travel by Dr. Meyor possible without cost to the State Board of Health. There were others who personally contributed funds to make this educational campaign possible.

Harrison County was one among the first counties in Mississippi to receive the benefits of a donation given the State Board of Health by the Hookworm Commission, for the eradication of hookworm. It fell to the lot of Dr. Roan, the County Health Officer, to lecture and hold clinics in the campaign against hookworm, at an annual salary of \$150. This work was ably directed by Dr. W. S. Leathers, who had been made Director of Public Health.

The value of Dr. Roan's work was recognized, and he was transferred to the State Board of Health force. He was succeeded as Health Officer by Dr. B. H. Hood, of Bond, whose salary was increased to \$300.00 per year. In July of 1915, I succeeded Dr. Hood at a salary of \$400.00 per year. A series of lectures on public health was delivered before the schools, clubs and other organizations of the county. Charts illustrating the lectures on the house fly and mosquitoes were used. Besides the educational work, irregular inspections of public and food handling places were made.

During 1917 the County Health Officer was giving all his time to the educational and inspection work at a salary of \$600.00 per year. In October the salary was increased to \$300.00 per month and arrangements made to begin anti-soil-polution work the following January. Soon after being drawn into the World War, we were actively engaged in such public health work as would render our troops more efficient. Malaria surveys had been made in 1916 and 1917. We were prompt to take advantage of the opportunities offered because of this work, and early in 1918 the County Health Department was doing all in its power to assist the anti-soil-polution work directed by Dr. Paul G. Pope, in the rural districts, and the work of the United States Public Health Service being done in the county because of the location of the Naval Station at Gulfport. This work was ably directed by Mr. Leslie G. Frank, Assistant Sanitary Engineer, U. S. P. H. S. The office of County Health Officer at this time was a trying one. Often we were compelled to act as a buffer between these authorities and the people. We lost no opportunity to

make the benefits of the work known and understood by them.

Many of our people resented Federal interference, and were complaining. It kept us busy gathering together as much of the war wreckage as possible and assisting in keeping the Health Department functioning. In 1919, we had constructed 8,057 toilets—1,557 being in the rural district, and by May of the same year, we had 172 miles of drainage ditches constructed in the malarial control work and the general improvement in sanitation was manifested to every one, but in spite of this work, with the general condition following the Armistice, there was trouble on all sides.

### *Morbidity Reports*

From July, 1915, at which time I took charge of the Harrison County Health Department, I made a special effort to secure accurate morbidity reports—for these efforts we were well paid. With the statistics gathered, we were able to show a reduced morbidity and mortality rate with their economical values.

With the franking privilege now available, each County Health Officer has no excuse for failing to obtain approximately accurate morbidity and mortality reports.

We furnish a dated card for each day of the month and insist on the prompt reporting of all contagious diseases and the return of all cards. A weekly supply of these cards is mailed to the doctors each Monday, and the returned cards are checked each day. Our morbidity report is compiled from these cards and a copy mailed to our municipal, state and federal health officer. An index and history is kept of chronic cases, venereal diseases, tuberculosis, malaria, cancer, pellagra, goiter, imbeciles, idiots, epileptics, deaf, dumb, blind, crippled, suspects, contacts and the under-nourished.

### *Records*

We must have records in order to do and keep up with the progress of our work. Remember much valuable time can be lost with or without records, and there is always danger of developing paper instead of actual workers. We have been unable to devise satisfactory record forms, and we are frequently at a loss to know what to record and what not to record.

### *Inspections*

Following an intensive campaign of education on sanitation and health, our first

inspection service other than that done by the County Health Officer was put on during 1918, when a number of medical students were secured from our state university through Dr. Leathers. These boys were anxious to serve and learn. They were useful and tactful in helping to establish this part of the work, which for financial reasons we were compelled to discontinue in part when we assumed the responsibility of financing the nursing department. Then the oil foreman assumed the responsibility for this work and has continued to give as much time to it as can be taken from his other duties. This part of our system should be strengthened by a full-time inspector who, together with such inspections as the oil and construction foreman could make, would give us almost an ideal unit. A number of people have to be compelled to clean up, and this number is materially reduced when the inspection force is adequate—this department requires more judgment and tact than any other. At all times one must be prepared to win by pleading in the interest of the public. A down right BEG spelled with capitals. It does not humiliate but elevates you and the department you represent. When you fight, fight to win, avoid prosecution, but where you must resort to it, have but one case in court at a time. Be sure of conviction and insist on a stiff sentence unless acceptable promises are made to obey the law. It has been our desire as far as possible to not offend our people, that we have not always been successful is evidenced by threats and a suit for damages for alleged unnecessary humiliation for not maintaining a sanitary toilet. Well, we got the toilet fixed and the complainant did not recover.

Under the direct supervision of this department, we have premises, food, garbage and inspection for malaria control, the placarding for contagious diseases and quarantine, the last being under the direct supervision of the County Health Officer that mistakes may be avoided. Make it a rule to sustain your subordinates, demand loyalty, but, above all, adhere to right. Our inspection force has been too limited. It would take more than three years to make one inspection over the entire county, leaving no time for reinspections. This inadequate department must be supplemented by assistance from all other employes, County Health Officer, nurses, foreman and laborers, each of whom are made to realize their responsibility for this work.

### *Public Health Nursing*

The first public health nursing in Harrison County was begun by Mrs. D. J. Williams in August, 1919. But few of our people realized the necessity of this work, and Mrs. Williams undertook this, as a volunteer service, in order to assist the County Health Officer, and to call the attention of the home makers of our county to the necessity of the work. The one outstanding feature of this work was the thoroughness with which it was done, each home with which the service came in contact was made to feel that it was receiving personal benefits that it could no longer do without. The following year, through the solicitation of Mrs. J. L. Heiss and Mrs. Williams, the public was appealed to and responded generously with sufficient funds to provide the salary and expense of a nurse. Our first salaried nurse began work September, 1920. The public health nursing department of our unit, while successful, has not been free of trouble. While supported by public contributions at first, it was soon evident that these contributions would not be received with sufficient regularity to justify the steady employment of a nurse. The appropriation by the county for the health department was only sufficient to carry on the work outlined other than the public health nursing. Expenditures had to be cut and consequently the work, as outlined, altered, so that this important part of the work could be continued. By special appropriation only \$100.00 per month was available for salary and expense of the nurse, the remainder must then come from somewhere.

The public had been coaxed and coerced until it was not in an approachable state. The general appropriation for health work was insufficient, something had to be done at once. The dismissal of the all-time inspector was inevitable. This seriously crippled our organization, but it was the only way we could see to continue the nursing service. A choice was forced between the nursing and inspecting service. This solution was probably one of our mistakes, for soon following, a dual authority was asserting itself. The \$100.00 per month appropriation was made by the Board of Supervisors, to the Harrison County Chapter of the Red Cross for the salary of the public health nurse, the nurse was, by agreement, to be directed only by the County Health Officer. This was contested, the clouds grew thicker, the storm broke, a change of personel in the nursing service with the delivery of the nurses' car and

equipment to the Red Cross—we had nothing but the empty bag to hold. I am afraid of entangling alliances. Keep your health department free of them, even if you move more slowly, and you will have fewer crosses. I am opposed to a dual, or divided authority in the county. With the readjustment of salary and expense and the complete support of the Board of Supervisors, we were able to weather the storm. October, 1922, a second nurse was added to our unit. One-half of her salary and expense is paid by the state through the funds provided by the Shepard-Towner bill. This entailed additional financial difficulties and restrictions as to service to be rendered, not altogether to our liking, but after these difficulties were corrected, with highly trained conscientious, hard workers, we have a public health nursing service second to none in the state. We are not paternalizing the service, but keep constantly before those among whom we work the idea of helping themselves. Our nursing service is not for the bed side, but a maternity and infant welfare, a school, a family service, a practical uplift of the entire family and community by teaching public health, directing and aiding the family to practice these teachings, and seek to obtain the best possible health service. We have not run free clinics, or clinics at reduced rates. But we help to secure the best, suitable, acceptable service without embarrassment to those unable to pay. The entire medical profession of our country is at command. Not one doctor has ever hesitated to render any service requested of them—we reciprocate. The nurses refer our people to their family physician and when in doubt, to the County Health Officer. Saturday is our regular office day on which we have parties coming from all parts of the county for advice. These are in turn referred to our doctors. This plan enables us to obtain and retain the co-operation of the entire medical and nursing profession, which we believe we have helped and made stronger. We try not to waste time, but give to each piece of work the required attention regardless of what may appear to be necessary to be placed in a report.

#### *Board of Supervisors*

While we were having trouble financing the nursing service, the Board of Supervisors were in sympathy with us. We endeavored to keep them fully informed on our work. At first it was with difficulty that we could get a decent hearing to pre-

sent our monthly report, but with things worthwhile to call to their attention, they gradually became our strongest supporters. They now know our public health needs and spend freely, to their full ability, to meet these needs. To succeed, you must have the co-operation of your Board of Supervisors and to obtain this, you must be patient, persistent, tactful and just. When they are once your allies, all your financial troubles are ended. The continued existence of the health department with whatever good work we have been able to do, is largely due to the efforts of the Harrison County Sanitation Committee. To Mr. R. L. Simpson, its chairman, our constant advisor, we are, indeed, deeply indebted.

#### *School Work*

We have not always found our work among the schools easy. For various reasons opposition bobs up—usually it is for the lack of information, not all the so-called educators are influenced. I have found them opposed to vaccination against small pox, lectures on Hookworm before the schools or the gathering of feces specimen from schools in an effort to eradicate hookworm, or other intestinal parasites. And another opposed the physical examination of school children where no other reason could be assigned by us than that a teacher had tuberculosis and has probably been the source of infection of at least two students. Notwithstanding these facts we have succeeded in obtaining 100 per cent feces specimen from seventeen schools in succession. The students have invariably competed for places for early examination. No public health work is a bed of roses, and from its very nature it is sometimes very unpopular. The reasons and benefits must always be apparent to make the work easy.

Your most sanguine expectations may be doomed to disappointment because of the assinity of some one,—at any time, remember, opposition may always be open. The work should be tactfully and well done. Our records show more than 50 per cent corrections within the first twelve months. School examinations should be under the supervision of the health department, that the proper advice may be given, records made and follow up work be had.

Scabies, impetigo contagiosa and lice were common when we began our work—now they are seldom found. The teachers do not hesitate to send children home when they are sick.

*Nutrition and the Under-Nourished Child*

As as as possible we have listed the under-nourished. This class has not been confined to the poverty stricken, but it is among the poorer classes we have worked principally. Others are being referred to their physicians. Among the poor under-nourished, we usually find hookworm and sometimes pellagra. We hospitalize these cases and try to provide suitable employment for those able to work, that proper food may be obtained. Many of these families are improperly handled and harm is done by well-intending relief organizations giving irregular assistance. The Farm Demonstration, Home Economic Agents together with the Health Department can frequently handle these cases advantageously. Much confusion has arisen because of unwise stress laid on the importance of weight and measures of school children—the great benefit of this work can't be denied. We would not attempt to minimize its importance, but do wish to direct attention to the fact that this work should be properly directed and followed up, otherwise much energy and good is lost. We know of numerous cases where harm has been done. The difference between over-height and under-weight and nourished and under-nourished, with their causes, should be well understood.

*Dairies*

Dairy inspections have been made from the beginning. In 1916, but few dairies had cement or wooden floors and milk houses—the primitive barns and barn conditions prevailing. Clean cans were seldom seen, tubercular tests of cattle had not been made. Of the first 1,300 dairy cattle tested, 80 were reactors. Subsequent tests have shown all the dairy herds free of tuberculosis. At all times the local supply of milk has been insufficient and the prices high. Part of our supply came from as far as Illinois. The one Pasterizing plant in the County has not helped either the supply or quality of milk offered the public. When we attempted to force the production of better milk by improved conditions, we have been threatened with a milk famine. But few dairy men have remained in business long at a time. Feed and cattle are expensive and the losses from tick fever heavy. With the present prospects for tick eradication, the future milk supply of Harrison County will have to be drawn largely from the outside, with the consequent dangers from incomplete supervision and lack of proper nour-

ishment for many of our children as well as adults. Recent dairy inspections show unsatisfactory conditions. We have long pasture seasons and should produce more and better milk.

*Poultry*

Not over 50 per cent of our poultry supplies are produced in the County consequently with a lack of milk and eggs we have many under-nourished, but new and larger poultry yards are being developed, and the family supply will be increased.

*Meats*

Our meats are derived largely from the western markets, and are now of a better grade than formerly. A number of butchers continue to handle locally raised cattle which as a rule are of inferior grade, slaughtering and peddling under unsanitary conditions. The municipalities failing to install abattoirs, has made it more difficult to enforce slaughtering and peddling regulations. However the majority of our markets are kept in an ideal condition, although meat prices are too high.

*Water Supply*

Two thirds of our population use artesian water and the remainder use pumps or shallow wells. Where pumps or wells are used, the supply is usually properly protected. However early in our work, thirteen cases of typhoid fever were traced to one infected community well and six cases to another. These wells have been referred to in our lectures to illustrate the necessity of protecting the water supply.

*Beach Front*

In 1914 the U. S. Public Health Service made a survey of our costal water. The survey showed pollution. Since 1917, and since the installation of more than 8,000 pit toilets, I have made surveys showing a complete freedom from pollution, except in the places in the vicinity of sewer outlets. We can assure our tourists of numerous bathing places where the water is clean, free from pollution and teeming with fish.

*Distribution of Literature*

I regret that the State and National appropriation for printing literature has been insufficient. Our Department is indebted to the Metropolitan Life Insurance Company for thousands of pamphlets. We have tried not to distribute literature indiscriminately. Our plan is, on securing a morbidly report to send literature to that family

on the disease with which they are suffering. If it be a contagious disease, we strive to get the appropriate literature into the hands of the neighbors. Indiscriminate distribution of literature is a unwarranted waste of public money. Charts or posters concerning our own people and their conditions are most appealing and are preferred to irrelevant or promiscuous ones. We have offered prizes through the Parent-Teachers Association to the school making the best health poster. This has stimulated Public Health work among the students and patrons. We can't claim priority for this kind of work for we are too young, but we began it early and before it was a popular method of arousing school interest.

The picture-show houses have always responded to all requests to exhibit such pictures or slides as we could obtain, also allowing us the use of their halls. Our need has been a picture outfit of our own, that we could use the appropriate picture at the right time in any given community. It is energy lost to show a picture, deliver a lecture to a community on small pox, yellow fever, cholera or plague when neither disease exists within a thousand miles and is unlikely to invade your county.

#### *Education and Publicity*

Publicity is powerful for construction and destruction unless wisely conducted; the destructive elements will assert themselves with dynamic force. Egotism on the part of the County Health Officer is the cap that sets off the powerful explosive, bringing wreckage and ruin to more than one Health Unit. The County Health Officer's position is one of sacrifice, and unless he chooses to make it so, he is in constant danger of lighting the fuse. We are often urged to make public the things accomplished, but it concerns us more to do these things for at least awhile. Due credit should be given to those who accomplish things, but be not troubled by the lack of such credit. It will usually come to the deserving who wait. Any way, await the psychic time. Our chapter on Publicity is an exceedingly interesting one. We were nearly five years without any thing being written. The local press was not friendly, being influenced by those opposed to us. Under these conditions publicity becomes an art only of the brave. With us this condition was not to remain, the columns of our paper are now open to us, and strong editorials with front page heavy head line, Public Health articles are frequently published. A department of Health and Sanitation is given us

each week on the Woman's Page under the management of Mrs. D. J. Williams. We can't say too much in praise of the publisher and editor of the Gulfport Daily Herald for this assistance. We publish weekly morbidity reports and make an effort by timely articles, to educate our people through the Press, on the dangers of and how to prevent the spread of diseases in or likely to be introduced into their community. The Medical Profession and the County Medical Association are our strongest supporters. In 1915, the County Medical Society donated a gold medal to the school boy or girl for the best essay on Tuberculosis. In 1916, they donated ten dollars in gold for the best essay on Sanitation in the Home. In 1923, they donated a loving cup to the school community making the greatest progress in Public Health and Sanitation, the cup to become the property of that Community winning it as many as three times. This has proven a powerful stimulant to Health work in the schools. Our regular inspection blanks are used for making the report of the conditions of each home represented in the school district, these inspection blanks are filled out by the children of the home, thereby enlisting the interest of the family. In several instances the interested schools formed a "Clean up brigade" divided into companies and squads to do the work; not a single citizen could resist this force and they joined hands with their enthusiastic children to win. So close was the contest this year, that the second best community was given five dollars in gold by the Health Department. The permanency of this plan seems to be established.

#### *Malarial Control*

Malarial control continues to be the leading feature of Public Health work in Harrison County. For the year 1923, there were but 58 cases in the entire County, with no deaths. This is a marked reduction of a disease formerly prevalent as shown by a yearly average of more than 1,539½ cases, with twelve deaths previous to 1918. A conservative estimate of the cost of a case of malaria is \$40.00. Malaria during the year of 1915-16-17, cost the people of Harrison County more than \$185,880.00, besides the suffering and 36 deaths. During 1923, there were no deaths and the total saving based on the same estimates was \$59,640.00. This saving in money more than seven times justifies the appropriation of \$8,000.00 by the County for general Public Health work. Had the malarial rate

of 1915, 1916, 1917 continued to January 1924, we would have had 7,384 cases more than we did have. The added cost to our people from sickness would have been \$295,360.00. Deduct the total cost of all health work for nine years from the saving as a result of control of malaria alone for the last six years and we have a total savings or profit of \$112,524.01.

In our malaria control work we have used several available known methods of control. Two-hundred and twenty miles of ditching and maintenance, oiling, fish, quinine, some screening and follow up work. The combined methods comprise the practical way; because of our mild winters we have to keep the anti-malaria work going twelve months of the year. We endeavor to follow up and sterilize all our cases. This plan has many advantages, prevents recurrence, guarantees a cure, assures increased efficiency, prevents further infection, makes a Health worker of the patient.

#### *Hookworm*

A conservative estimate of the prevalence of hookworm disease in Harrison County in January 1918 was 20,000 cases. It was sapping the industrial life of our people, causing poverty, crime, sickness, and deaths. Since then, the County Health Department has records of treatment and cure of many of these people. We have now probably less than 2,000 cases in the County. We have records of most of these cases and with the follow-up system of the Health Department, through the Nurses, we will not be long in getting free of this disease. Due to the toilet improvement and better sanitation around the homes infectious intestinal diseases do not occur so fre-

#### *Dysentery*

Dysentery is by no means so prevalent quently.

or so fatal as formerly. Since the first campaigns against the fly and the installation and use of the pit type toilet, the number of cases reported have continued to decrease. In one community there were three deaths within three weeks, sanitary toilets were immediately installed and now six years later there has not been another case of that disease in that community. When infectious intestinal diseases are reported a representative of the Health Department makes an immediate investigation, and the story related above is told. An effort is made to protect the inmates of the home and community.

#### *Typhoid*

A study of our typhoid fever charts show a marked reduction in the prevalence of this disease and the presence of all three types, typhoid, paratyphoid "A" and "B". The reduction began soon after our educational campaign started when our first lecture in the schools was on the fly. The reduction continued when we gave our attention to the dairies, and when the open back toilets were replaced by the pit type, about this time we began the first systematic vaccination against the disease. We have not practiced wholesale vaccination against typhoid fever except as a war measure when 5,890 vaccinations were done with the triple vaccine. We have not used the State Laboratory vaccine because they furnished only the typhoid vaccine and our reports show near 30 per cent paratyphoid "A" or "B". We have not been very successful in tracing the source of infection of our cases. In a study of 39 cases covering a period of two and a half years, we have traced but one infection to another case, all other cases being far separated with no direct or indirect communication between them. We had under suspicion some of our dairies where we knew employes had formerly suffered with the disease of known types. Among the patrons of this dairy, but one case developed and it was of a different type. We were not able to prove this employee a carrier. We have been compelled to carry in our morbidity reports, several cases diagnosed as typhoid, solely on a positive Widal after vaccination within two years. We have had several cases in which the incubation period left us in doubt as to whether the disease was contracted in or out of the County. Two students of the same family went home for a vacation, shortly after returning, they came down with typhoid, a week apart. We were charged with the infection, no other cases developed among us, there were other cases in their home town. We were charged by a neighboring State Health Officer with being the source of typhoid infection of a student of Sophie Newcomb. We can not deny this, because of a split period of incubation, investigation failed to show other cases originating in our territory. Our oyster supply is being watched and has been suspected of being the source of the so-called sporadic cases.

#### *Tuberculosis*

With an index and history of cases, contacts and suspects are kept under observation and taught the first signs of Tubercu-

losis and advised to apply for examination to their physician or the Health Department at regular intervals. They are impressed with the fact that more than 85 per cent of our people have had and recover from tuberculosis—that they can and will be included in that large list if they will follow instructions. In our follow up work, we never show that we are in a hurry, giving each person full time, making sure they are satisfied and will return for advice. Their homes are visited and everything done to promote the welfare, comfort and safety of the patient and contacts. We stress the avoidance of infection and reinfection, seeking to make use of their present home surroundings and conditions, instead of producing a desire for the impossible. Dissatisfied patients do not improve. We teach that tuberculosis is curable and that there is no need of a useless fear of infection, that thousands are exposed who do not contract the disease—that thousands recover, but at all times, common sense and our present knowledge of the disease must be used to combat it.

At our County Farm, we have a model cottage with hot and cold water, baths, electric lights, heat and screens for the care and comfort of the indigent tubercular.

#### *Veneral Disease*

Control measures for veneral diseases were not instituted with us until 1918 when at one time we had thirteen female prostitutes in our County Jail, and two male prostitutes at another time, but jails and bull pens will not control these diseases. Promiscuity must be broken up but it takes more than the Law. Yet authority, judiciously exercised, is one of our most potent measures. A good Probation Officer is indispensable, and welfare workers should be at hand, poverty or want is the great obstacle. In some cases, only the saving graces of God can redeem. We try to locate and have treated all cases. Our records show more than 50 per cent reduction of these cases with increased numbers of latent cases being treated. We know many cases are not being reported to us, but believe the proportional reduction is greater among the negro than among the white race.

The so-called high-class hotel is our menace—one visiting Gulfport from Jackson, left her syphilitic tag on thirteen young men, all of whom were not single. Her efforts at vamping our Venereal Disease Director lead to her discovery. We are within a vicious triangle, New Orleans,

Mobile, Hattiesburg and Jackson. Constant vigilance is our best safe guard. National Prohibition Laws have had an undoubted effect in suppressing Venereal Diseases. The companionship of alcohol and venery being disturbed, drunkenness under present conditions leading to detection.

#### *Pellagra*

Pellagra cases reported for Harrison County for six months of 1915, 171 cases, and for the year 1916, 114 cases; 1917, 171 cases; 1918, 67 cases; 1919, 15 cases; 1920, 4 cases; 1921, 6 cases; 1922, 7 cases; 1923, 9 cases. Regardless of its cause or reduction, these cases are among the poorly nourished, and many of them heavily infected with hookworm.

#### *Goiter*

While we have a few cases of goiter, thyroid disturbances are not apparently as frequent among our people as among those in other sections. We found but thirteen cases among 5,190 school examinations. Adult cases are more numerous and we find a number have come from other States.

#### *Communicable Diseases*

We placard all reported homes where contagious diseases exist and teach the dangers of these infections. We do not believe children should contract measles, mumps, whooping cough or other diseases for the sake of being over with them, for economic or other reasons.

We are pleased that for the past three years, the average number of homes needing placarding has been much fewer than formerly. The rural schools through the teachers and student bodies, have assisted in the control of contagious diseases. Sick children being promptly dismissed. Because of the rapid change in the personnel of teachers and student body, constant teaching on the part of the Health Unit is necessary.

We continued to fumigate for its psychic effect, for sometime after we were convinced of its uselessness. Now except for a few diseases, we give a good cleaning followed with air, sunshine and paint.

#### *Immunization or Vaccination*

We push vaccination only where the diseases against which we vaccinate are present, but are ready to vaccinate any time we can catch a subject. That Tetanus prevention is not used as often as it should be is shown by our morbidity reports.

*Laboratory*

Our Laboratory advantages have been excellent. In addition to access to the State Board of Health Laboratory, we have had through the kindness and generosity of our President, Dr. W. A. Dearman, free access to the Gulf Coast Laboratory, where a trained technician is on duty at all times. During 1918, 1919, we had in the office a Microscopist doing malaria and hookworm work. At times we have had available and used the Laboratory of the U. S. Army, the U. S. Public Health Service and Veterans' Bureau Hospital No. 74, also the King's Daughters Laboratory at Gulfport. The local laboratories being used when the work was urgent. These laboratories have been of inestimable value to us, not because of Public Health work alone, but they have

electric lights, hot and cold water, baths, steam heat, wide comfortable porches, screened throughout. We claim some part in this work. Our County Farm and Jails are in a Sanitary condition.

*Life Extension Examinations*

We have not made as many life extension examinations as we should and regret that the Medical Profession does not take more interest in this work. Until thorough routine recorded examinations are made by the family or consulting physician, we will be handicapped. Our hospitals should provide and advertise this service.

*Appropriation and Expenditures*

The attached statement shows the source of appropriation and expenditures by years from 1915 to 1924, totalling \$195,285.99.

	U. S. P. H. S.	Int. Board of Health	Harrison County	Gulfport	Biloxi	Long Beach	Pasc Christian	State Mat. & Inf. Wel. Div.	State Work at Beauvoir
			400.00						
			400.00						
			1,100.00						
	\$4,798.45	5,300.00	10,951.47	8,500.00	4,630.35	169.75	1,181.59		
			8,900.00						
	900.00		1,600.00						
	1,200.00		3,600.00						
	1,200.00		11,600.00	1,000.00	1,000.00	250.00			
	1,200.00		11,600.00	1,480.00		310.00	240.00	227.03	1,465.66
	1,200.00		11,600.00	1,000.00	1,000.00	250.00	240.00	831.09	1,500.00
	600.00		11,600.00			250.00			
Total	91,098.45	5,300.00	73,361.47	11,980.00	6,630.35	1,229.75	1,661.59	1,058.72	2,965.66

helped to teach our people that they are entitled to this kind of service through their physician, and in this way have improved the medical service rendered.

*Hospitalization*

As our Hospitals have developed and can care for the patients, we have endeavored to hospitalize the rich and poor alike. A wide range of cases have been taken into these hospitals—maternity, mastoid abscesses, appendicitis, itch, pellagra and leprosy being among these hospitalized.

The development of our hospitals and the general educational work of the Health Department, together with the County Medical Society, has given to our people, a greatly improved Medical Profession—good doctors. I regard this as one of the greatest blessings that has come to us, as a result of our work.

We have one of the best equipped homes for the poor of any County in the State,—a modern building, nicely furnished, with

The following amounts were contributed by other sources:

John Allen, of Long Beach	50.00
W. T. Stewart—G. & S. R. R. Co.	493.50
During 1915-16-17 postage and stationery furnished by Harrison County, approximately	100.00
	<hr/>
	643.50

DISCUSSION

Dr. L. D. Fricks, Surgeon, U. S. Public Health Service: It is a pleasure to listen to Dr. Williams' report of his activities as health officer of Harrison County, and not only that, but it is a liberal education to hear such a health officer detail his experiences over several years, and, as I think, in a fair way indicate the measures applied by him and the results which have been secured. I do not mean to say that equally good results could not have been secured by some other man in some other way, but it certainly has been done in this way by Dr. Williams in Harrison County. I know that to be true because I have kept in contact with Doctor Williams' work down there since I have been in charge of malaria investigation for the Government. This report indicates to me that the man who throws his whole heart into county health work, who has ideas of his



own and feeling of personal responsibility to the people as Dr. Williams has will get results a hundred fold, from his effort not only directly but indirectly. I firmly believe that every ditch that has been dug in Harrison County for mosquito control, every gallon of oil that has been sprayed down here, in addition to the direct results in eliminating mosquitoes, have had a much greater benefit by educating the people in malaria transmission and the importance of health protection which will last for years to come.

There can be no doubt, I think, in the mind of any man who would go down there and go over Doctor Williams' method and figures with him and see for himself the work that has been done—about the results secured. And I firmly believe, although it might not be as easy to get the same results in malaria control in the Delta region, still I believe that the same thing can be done there and anywhere else in the South. True it will take time, the bigger the problem the longer the time, nor will you be able accurately to measure the results from month to month or from year to year; but in the final summing up after a period of five or ten years there can be no question as to what will happen to malaria in any community where the county health officer works with a fixed idea of wiping it out based on a knowledge of the fundamental principles involved, continually hammers into the minds of the people the fact that malaria is transferred by the malaria mosquito and can be gotten rid of by taking some thought and spending some money.

You all know that one of the big handicaps under which we have labored in public health work in the South is the character of the rural population with which we have to deal—mostly negroes. Rural public health advancement is fundamentally a question of the education of the people in disease prevention and the negro is very backward, slow to grasp new ideas, slower to give up old superstitions.

I want to say as earnestly as I can that there are two conditions, not theories, confronting us right now that almost make a crisis for the South, and therefore the question of how we meet these two problems in the next few years is of enormous importance to us all. One is the possibility of developing the power at Muscle Shoals and producing fertilizer there at a greatly reduced price to the southern farmer. This will be of enormous importance to the South as a whole, by making farming much more remunerative and permitting the poor hillside lands to be placed in cultivation at a profit.

Another thing which is pressing us and is absolutely inevitable, is that the southern farmer can no longer count upon an unlimited supply of cheap negro labor. I do not believe that under conditions as they now are there will ever be in the future an unlimited surge of cheap negro farm labor in the South. Our present immigration laws have practically cut off foreign immigration into this country, and as a result, the industrial plants of the North must draw on southern negro labor for their supply. Last year 500,000 negroes went north. Probably under depressed industrial conditions that drain will not be so great this year, but whenever employers in Detroit and Pittsburgh are willing to pay \$7 or \$8 a day for day labor they will irresistibly compete with the southern farmer for his labor.

The moral of this situation to us all should be that now is the time for the medical profession at

large and our public health officials in particular to render a larger service to the rural communities of the South. We owe it to ourselves and to our people to render this service, to insure health protection not only to the white farmer and his family who may wish to come in and cast his lot with ours, but in equal measure to every negro who refuses to be tempted by the higher wages which northern industrial plants may pay, and prefers to stay with the people and on the land which he knows so well. Without such a service being freely and generously given by the medical profession, it seems to me as if the South were due for a period of restricted agricultural production and business depression as disastrous to us as was the period of reconstruction.

Dr. W. S. Leathers (University): I regret that I did not hear the paper read which I am to discuss and therefore I feel somewhat at a disadvantage in responding. I appreciate very fully the splendid work which has been done in Harrison County and I may state that I have had the opportunity of following it during the past several years. I think one of the most helpful things that has been done in the Harrison County project is the development of a system for making morbidity reports. The point of interest in this connection is that each physician has made daily reports for a number of years on the infectious diseases occurring in his practice. I have recently been engaged in the preparation of a paper on County Health Work and I have endeavored to secure information concerning the data showing the success with which such work has been done. I have found great difficulty in getting the kind of information needed owing to the fact that there is a lack of uniformity in keeping records and making reports in the respective states of results obtained in county health work. It is encouraging to note that the statistical information of Harrison County is perhaps as accurate and satisfactory as any that can be obtained in any of the southern states at this time. This is due to the fact that the methods which have been used in reporting morbidity data in Harrison County are more in accord with a model system than has been employed in any other county with which I am acquainted.

In conclusion, I wish to say that in my judgment, the future of health work, not only in this state but in the country at large, will depend largely upon the development of efficient county health organization. If a disease is to be controlled, it must be by an efficient health officer working day by day among the people of a community, and in this way securing their confidence in the methods which are used and the results obtained in the control of disease. Of course, it will always be necessary to have an efficient central organization as a great directing influence and to sustain advisory relation to local health organizations, but I feel confident that the thing of greatest importance in the development of health work in Mississippi in future will be the extension and establishment of efficient county health departments.

The medical profession need not be afraid of such a development because in my opinion it is the only way by which the public will be educated concerning the advantages accruing from scientific medicine. When the citizenship of the state is so informed concerning the methods of treating disease that it will seek the advice and professional skill of the practitioner of medicine, the gain that

will be made by the physician in active practice will more than compensate for the apparent financial loss incurred in the prevention and control of disease. Moreover, it is the duty of the practicing physician to promote in every legitimate way the principles of keeping people well and standing for conscientious public health development. When this result is accomplished, there will be less of quackery not only in medicine but generally speaking.

Dr. H. M. Folkes, (Biloxi): Doctor Leathers has hit the nail on the head relative to the prevention of disease. You must not alone have health organizations in each county, headed by competent and knowledgeable, forcible health officers, but you must have the cooperation of every practitioner in that county. It has been my privilege and good fortune to have done my level best to aid Doctor Williams a number of times in Harrison County. Not only must you aid by giving the county man your moral support, but you must be ready to go before the Board of Supervisors and bring pressure on those people to help our county health officers.

Doctor Williams has most unselfishly labored and devotedly served the people. I know of nothing that a human being can do that is less remunerative and less appreciated than health work. I was in it for a number of years and I know the fights a man has who undertakes to keep the people well. They do not want to be well if you interfere in the slightest degree with their pleasures or what they regard as their privileges, and if you go to the Board of Supervisors or the City Council and ask for money it almost kills them. They cannot understand what you mean by prevention of disease as long as they are themselves well. They do not want to give money unless they have concrete evidence of value received. Doctor Williams has been able to do that. So back up your county officer to the limit, especially when he is a man like Doctor Williams.

Dr. Oscar Dowling, (New Orleans): I would like to express my personal appreciation of the splendid work done by Doctor Williams in Mississippi. I have had occasion to go to Harrison County a number of times and have been inspired by him and also by Dr. Leathers.

Dr. Daniel J. Williams (closing): In the paper I deal with school work, nutrition food supply, and more particularly with the prevention of hookworm, dysentery, typhoid fever and venereal disease.

As to the Board of Supervisors, let me say to any one interested in health work, do not get impatient with them, they have their difficulties.

The ravages of hookworm are almost as marked with us as malaria. We had 20,000 cases of hookworm and we have 2,000 cases yet, but we will get rid of them in the next three or four years.

## THE TREATMENT OF PLACENTA PREVIA\*

C. JEFF MILLER, M. D.  
NEW ORLEANS

Placenta previa, which is perhaps the most common cause of antepartum bleeding, is also the cause of a painfully large

proportion of our obstetric tragedies. That the prognosis is always serious is proved by the fact that the mortality is variously estimated as from 4 to 36 per cent, while 66 per cent of the babies are lost, a joint mortality quite as high as that resulting from eclampsia, and quite as preventable. Most cases of eclampsia can be prevented by prenatal prophylaxis, though when the condition has once developed, since all methods of treatment are still empirical, the outcome is in a sense beyond our control. On the other hand, while no amount of prophylaxis can prevent the occurrence of placenta previa, the outcome of the condition in the great majority of cases is entirely dependent on the type of treatment employed, and of no other obstetric complication can it be more truly said that the mortality is largely preventable.

It is not my intention in this paper to dwell on the causes or the clinical history of placenta previa, but I should like to remind you that the name implies the development of the placenta in the lower uterine segment and that the condition is classified as centralis, lateralis or maginalis according to its degree of encroachment on the internal os. The most characteristic and usually the only clinical symptom is painless, causeless bleeding any time after the sixth month, most often in a multipara; the first hemorrhage is rarely of a severe character and may be a mere spotting or a slight bloody discharge. To the inexperienced practitioner, as to the patient herself, it seems a matter of small moment and too often the treatment is merely rest in bed, possibly with an anodyne, and a superficial vaginal examination or none at all. Because the initial symptoms lack the tragic aspect of premature separation of the placenta, for instance, the picture is misleading, particularly to the man of small experience, and a false sense of security is provoked. But the bleeding will recur when least expected, sometimes as an acute hemorrhage, sometimes as a continuous slight discharge which will eventually so weaken the patient that the normal blood loss of parturition added to it may serve to bring about a fatal termination. It is because of this underlying menace that every case of painless bleeding after the sixth month of pregnancy demands a presumptive diagnosis of placenta previa. Confirmation is usually a simple affair; vaginal examination reveals an edematous and boggy cervix, often quite large, pulsating uterine arteries, and sometimes the cushiony mass of the placenta itself. If the ordi-

\*Read before Orleans Parish Medical Society, November 10, 1924.

nary examination does not establish the diagnosis and if no other explanation can be found for the bleeding, examination under anesthesia is justifiable; premature labor may be excited but the risk to the mother is grave enough to warrant this possibility. And once the diagnosis has been established the immediate termination of pregnancy is the only safe course.

I need not remind you that the menace of fatal hemorrhage at any time is so serious that the only place for a patient in whom the condition is diagnosed or even suspected is the hospital. Moreover, no vaginal examination should be attempted until the patient has been cleaned up quite as carefully as if she were an actual parturient, and until the obstetrician has scrubbed as carefully as for an abdominal operation and has put on sterile gloves. The reason for such scrupulous care is obvious: the gaping placental sinuses are in such close proximity to the vagina as to make the possibilities of infection very serious and because of this fact as well as because of their frequently impoverished blood picture such patients are peculiarly prone to sepsis. Again, the gentlest manipulation may excite an acute hemorrhage and no examination should be attempted until preparations have been made for packing the vagina and pelvis.

Dr. John O. Polak, in a recent valuable communication on this subject, has pointed out that three general principles should guide us in every case, to avoid blood loss, to avoid sepsis, and to minimize trauma. Beyond these basic principles no single method of treatment is applicable to every case, and the procedure to be adopted must depend upon the period of pregnancy, the degree of cervical dilatation, the amount of hemorrhage, the type of placenta, and the condition of mother and child.

Before the period of viability the main aim is to secure dilatation of the cervix and to control bleeding. Intra-uterine manipulations of any sort are rarely necessary, the best results being obtained by a firm vaginal pack consisting of cotton pledgets or gauze soaked in boracic acid solution, squeezed partially dry, and applied through a Sims speculum with the patient in the Sims position or better in the knee chest position. The entire pelvis should be packed and not merely the vagina. As soon as dilatation is complete a bipolar version is done and nothing more, the subsequent delivery being effected by uterine contractions alone. The breech acts as a perfect tampon to control the bleeding, and since

the life of the child need not be considered, nothing is to be gained by extraction, particularly since such a procedure is fraught with serious danger. The tissues of the lower uterine segment are friable, numerous large veins in the vicinity of the cervix predispose to hemorrhage, and the slightest force may result in rupture of the uterus.

After viability, in the marginal type, which fortunately is the most frequent and least serious, simple puncture of the membranes will usually stimulate uterine contractions and control the bleeding by forcing the head against the placenta as a tampon. When for any reason the patient cannot be moved to a hospital and the physician must work with limited equipment or nothing at all, Braxton Hicks bipolar version is a very satisfactory procedure. If labor has not begun I am a firm advocate of the vaginal pack, which, just as in the non-viable cases, will control bleeding, stimulate labor pains, and reduce the chances of carrying infection into the uterine cavity. Perhaps the most uniformly satisfactory treatment today is the hydrostatic bag, which is introduced into the amniotic sac after rupture of the membranes or perforation of the placenta, then distended with sterile water and attached to a one or two pound weight. Cragin advocated the use of the bag as an extra-ovular pack alone but I have had little personal experience with this method because I have found the other technique entirely satisfactory, a view in which most authorities concur. Only the largest sized bag should be used; I have frequently seen the expulsion of the smaller bags soon after contractions have set in followed by furious hemorrhage, which was difficult to check because of imperfect dilatation. In any case the obstetrician should be prepared to perform version or to pack the vagina as soon as the pack has been expelled. Further delivery is effected according to the indications of the individual case. If the head is engaged there is no contra-indication to the use of forceps provided the application and traction are done very gently; as a rule, however, the head has been displaced by the bag and version is the more convenient procedure. If the child is dead, simple version is all that is indicated; if it is still alive extraction may be done very carefully and slowly, with due regard to the friable cervical tissues.

Manual or instrumental dilatation is practically always unsafe. No matter how carefully and gradually it is done deep tears result, infection is the rule, and rupture of the uterus is a grave possibility. Cesarean

section also has a very limited field. It is occasionally justifiable in elderly primiparae with rigid soft parts, at or near term, when there has been no serious blood loss and when infection is definitely absent. You will agree with me, however, that these conditions are seldom met in a large hospital service. Most of our cases reach us days or even weeks after the initial bleeding, many of them actually or potentially infected from repeated examinations without proper aseptic precautions, and I need not remind you of the hazards of cesarean section under such circumstances. The vaginal cesarean operation is obviously contra-indicated. The argument that the fetal mortality will be markedly diminished by cesarean section is fallacious; a large percentage of the babies are premature and either do not survive delivery or die shortly afterwards, so that the maternal risk, which is grave enough in itself, should certainly not be increased for the sake of a child whose chances are dubious at best. The advocates of radical measures in the treatment of placenta previa have never equalled the results experienced men have obtained with more scientific obstetric procedures such as the pack, the bag and version, and their arguments are demolished by their own poor results.

I have been interested in noting how the figures for placenta previa at Charity Hospital bear out the principles I have laid down in this paper, for the forty cases admitted during the years 1918-1923 and handled by 13 different men illustrate every type of treatment. To analyze them briefly, 30 were white and 10 colored patients; the ages ranged from 15 to 44, with the majority between 25 and 35; the parity ranged from one (in 4 cases) to 14; the period of gestation ranged from 5 months to term. The type was stated in only 24 cases and was centralis in 12 of these but because the figures are so incomplete I do not think fair conclusions as to type can be drawn from them. One case was treated expectantly and the final outcome is not known. Three others delivered spontaneously, almost immediately after admission. Of the remaining 36 cases 22 were handled by radical and 14 by conservative measures. In the radical group 8 patients were delivered by cesarean section, of whom 2 died and 4 of the remaining 6 had more or less serious infections. You will realize for yourselves the significance of a febrile convalescence in such cases; it means almost invariably cesarean delivery in subsequent pregnancies. Five cases were treated by

version followed by extraction; of these 3 died and one of the remaining two had a serious infection with temperature to 105. Nine were treated by manual dilatation and version, 5 of them being on the same service. Two died, one of ruptured uterus and one of shock; 4 of the remaining 7 had lacerations and infections, most of them severe, and another was badly lacerated but escaped infection. In the second or conservative group, 3 were treated by pack and version, with no deaths and one infection. Eleven were treated by the bag, followed by forceps or version in 7 instances. There was one death and 2 infections. The total maternal mortality therefore was 8 of the forty cases, 20 per cent, the deaths being variously due to sepsis (3), shock (4), and ruptured uterus (1), and all but one of them occurring in the group treated by radical measures. The morbidity was 12, 38.7 per cent, three-quarters of it occurring in the group just mentioned. These figures speak for themselves. It is interesting to note that 18 of the cases were on the same service, one man handling 12, and that the mortality in this group was zero. It is interesting to note, too, that nearly every infection on this service followed a departure from the conservative measures usually employed.

Twenty-one babies were born dead or died before leaving the hospital, giving a fetal mortality of nearly 54 per cent. As 6 were born before the period of viability, 3 were macerated, and one hydrocephalic, the corrected mortality is 28 per cent, which is still sufficiently high to prove our contention that the interests of the child in placenta previa are already in such jeopardy that any additional maternal risk for its sake is entirely unwarranted.

The figures I have quoted to you from the Charity records can be paralleled in other clinics and in far larger series of cases. Circumstances beyond our control will probably never permit the fetal mortality to be lowered very materially. But certainly the appalling maternal mortality will be substantially reduced when these principles are generally recognized and acted upon:

1. Placenta previa is a true emergency, as grave in its consequences as eclampsia or ruptured ectopic, and demanding just as prompt treatment.

2. Any unexplained bleeding after the sixth month of pregnancy should be diagnosed and treated as placenta previa until it is proved otherwise, and the diagnosis

should be established even at the risk of exciting premature labor.

3. Immediate termination of pregnancy should be the rule as soon as the diagnosis is confirmed; temporizing measures are justifiable only in exceptional cases and never except in a hospital.

4. Examinations are to be made in a hospital, under the strictest asepsis, and never until preparations have been made for immediate packing or version.

5. Forcible dilatation, extraction and cesarean section give uniformly poor results; the pack, version and the bag give the most uniformly satisfactory results. The mode of delivery must depend upon the indications in the individual case, but the basic principles in every instance are to conserve blood loss, to avoid sepsis, and to minimize trauma.

#### DISCUSSION

Dr. E. S. Lewis: I had hoped my desire to be a listener during the meeting would be gratified but as my Fellow Members have decided otherwise I cannot refuse taking part in the proceedings. Though my hearing is somewhat impaired I experienced no difficulty in following the drift of Dr. Miller's paper. His procedure in the management of Placenta Previa is practically the same as was practised and taught by me in the past. Regarding this condition as dangerous to life, the termination of pregnancy is indicated, before viability of foetus by rupturing membranes, and tamponing as described by Dr. Miller. If viability is established and no serious hemorrhage has occurred and sufficient dilatation present, bipolar version may be performed, rupturing membranes and with two fingers seizing a foot which when drawn in the vagina and slight traction made controls bleeding by pressure of breech. I am in accord with Dr. Miller in seeing no indication for Caesarean section in Placenta Previa. In central implantation, control hemorrhage by thorough tamponing until dilatation permits of Podalic version, which is performed by partial separation of placenta on one side, rupturing membranes, seizure of a foot and quickly turning. I agree with Dr. Miller in discountenancing thrusting the hand through the placenta. The force required will cause as great if not greater detachment than by the first measure described. No attempt at version should be made unless assured the hand can enter, as serious hemorrhage will follow.

In a condition bordering on collapse following serious hemorrhage do not attempt version. The additional shock is likely to prove fatal; I had such an experience in my early years which taught me a valuable lesson. Even tamponing should not be employed unless bleeding persists. Ordinarily it has ceased from weak action of heart and clotting. Treat general condition and following reaction version can be performed, but do not empty uterus too rapidly.

Dr. E. L. King: I certainly hate to succeed Dr. Lewis in discussing Dr. Miller's paper, but I will open my discussion with one of his teachings to the class, viz: that once a diagnosis of placenta praevia is made, the patient should not be left until delivery is effected. You cannot

tell just what will happen in these cases and it may mean a wait of from four, six, to ten hours. It is imperative to have some competent person remain with the patient until delivery is accomplished, particularly if you put in a bag. We have had the experience, in the hospital, of putting in a bag, assuming that it would take four hours to come out, and it would be expelled in an hour and a half. Now, should we go off and the patient not be in the hands of one qualified to handle the situation, if there be undue hemorrhage, it is possible for the patient to succumb in five minutes.

It is also advisable to have everything in readiness, the anesthetist included, see to the sterilization of everything needed, and, as soon as the bag is out of the cervix, remove it, get the patient asleep and go ahead with the version. The bag used is generally a No. 6 Voorhees. By the time the bag comes out, you can deliver the patient without trouble.

Another point is the value of transfusion in these cases of profuse hemorrhage. I believe we have saved many patients in the hospital with transfusion that without it would not have been saved. We make a practice in placenta praevia after we put in a bag (or no matter what other method we employ) to secure the blood of as many of her relatives as possible, have it typed and when a good donor is procured, keep that one in the hospital. Later, should we decide to transfuse, we have the citrate and apparatus all ready. Sometimes we can tide the patient over with saline solution, intravenously administered.

I would certainly like to hear more about the centralis type, which is the worst form, and the form in which Cesarean is most often indicated. The great difficulty lies in making a correct diagnosis with the cervix only one or two fingers dilated. We succeed in about 50 per cent of the cases, the diagnosis being often changed, after full dilatation, to placenta praevia lateralis.

Dr. C. Jeff Miller (concluding): For some time it has been my firm belief that the radical measures so often adopted in the treatment of placenta previa are a contributing cause to our high mortality, and it was chiefly for this reason that I made the comparative study of the statistics from Charity Hospital. They prove very definitely that cesarean section, and more particularly vaginal cesarean section, does not produce the results claimed for it. To my mind the operation should be done only in cases at term, when the child is alive and in good condition, when the hemorrhage has not been severe and you are very certain that the patient has not been infected by improper examinations or previous attempts at delivery. Unless you respect these points you will have a double disaster; if both mother and child do not succumb at the time of operation, the mother is very likely to die later from infection.

In reviewing the hospital cases I was impressed by the number reported as of the centralis type, although, as I pointed out in the body of my paper, the figures were too incomplete to permit us to draw definite conclusions. This is fortunately the rarest type, because it is the one in which we have the highest fetal and maternal mortality, one reason being that bleeding from such a placenta almost invariably occurs before term and therefore we are always dealing with the premature child. Placenta pre-

via centralis is always given by the advocates of cesarean section as a definite indication for the procedure, and I feel that often in their enthusiasm they are tempted to make the diagnosis too hastily. I believe the best procedure in the centralis type is that offered by Dr. Lewis. It is wisest not to puncture the placenta; by careful manipulation it is nearly always possible to strip it off on one side enough to reach the membranes, and sometimes this slight separation actually controls the bleeding, as it allows the retraction of the musculature in the passive portion of the uterus. In very desperate cases, when the hemorrhage is profuse and apparently beyond control, actual manual separation of the placenta may be followed by prompt cessation of the bleeding.

I also wish to emphasize the value of rectal examination when it is not possible to prepare the patient properly for a vaginal examination. The spongy placenta can be made out almost as well by rectum and a possible source of infection is thereby eliminated.

The question of version and extraction has been brought out in the discussion. The two terms are so closely associated that the inexperienced man is very likely to believe that the one procedure must necessarily follow the other. It is just here that your disaster is likely to occur. A gently performed version by the bipolar method can usually be carried out without disturbing the placenta and if a foot can be secured and brought down through the cervix, slight traction on it will produce uterine contractions sufficiently strong to control the hemorrhage, and labor can proceed spontaneously. On the other hand, extensive lacerations practically always follow rapid extraction. Simple version gives the necessary stimulation for uterine contractions, the presenting part acts as a plug to control bleeding, and gentle manipulations do not injure the soft parts, but rapid extraction afterwards converts a safe procedure into a very dangerous one.

## THE MODERN TREATMENT OF THE INSANE\*

C. D. MITCHELL, M. D.,

JACKSON, MISS.

When my good friend, Doctor Shipp, asked me to prepare a paper for this convention on "The Modern Treatment of the Insane," it was my intention to take up the phase of the early symptoms of insanity and means whereby you could more readily and quickly get your patients into the hospital while they were amenable to treatment, rather than wait until the cases were chronic and incurable. But inasmuch as the Legislature has reduced my supporting funds we already have more people out there than we can care for in the next few years, and I deemed it wiser to withhold this information from you. But I hope some time in the future to have more mon-

ey and then I do want to talk to the doctors of Mississippi relative to these conditions.

Today, my friends, I thought it might be interesting to you to have me tell you something of the way in which we handle patients that you send to our hospital. It has not been many years since the hospital for the insane was not a hospital at all, but only a place of detention, a prison, so to speak, where patients were sent and locked up, and with very little care and attention allowed to work out their own salvation. For a good while they were fortunate if they did not have to stay locked up there until they died. If they tore their clothing, no clothing was given them; if they destroyed the furniture, the furniture was moved out of the rooms; if they tore their beds down, no beds were allowed them, and if that did not suit them and they made a noise they were locked up in iron cages, chained to the floor, or placed in straight-jackets. But today when a patient is sent to the institution we put him in what we call the receiving ward. He is given a bath and put to bed and kept there for three or four days, and every four hours a nurse takes his temperature and counts his pulse and respirations and records them in the presence of the patient where the doctor, when he comes in, may read this chart. This may be of no value to the doctor, because he already knows that that patient's temperature is normal; he knows the pulse and respiration are normal; but the effect that it has on the patient's mind is marvelous. He is taught to believe, and made to believe, that he is in the hospital because he is sick, that there is something the matter with him, that he is in the hands of doctors and nurses who are interested in him and trying to find out what is the matter with him, and that if possible they will cure him and send him back home. And I want to say to you that this impression goes all through his stay at the hospital.

During the three days the patient is kept in bed the doctor is required to make a complete physical examination, laboratory tests are made, a Wassermann made in every case, the blood tested for malaria, the sputum and feces tested, and urinalysis made—as complete physical examination as is made in Touro Hospital in New Orleans. Then inside of a week the doctor is required to bring that patient before the full staff and we have staff meetings every week day (not Sunday) for the complete mental examination of patients, and this patient is mentally diagnosed and a plan of

\*Read before the Mississippi State Medical Association, Jackson, May 13-14, 1924.

treatment mapped out, and he is placed in a suitable ward and treatment carried out.

We try to classify our patients. You will find the epileptics in one ward, untidy patients in another ward, disturbing and noisy patients in one ward, and the good patients all together in a sort of ward. We have two open doors to this ward and they are not locked—the patients can come and go at their own pleasure, something like a home. A patient has not been in that hospital many days before he knows about this unlocked ward. Nobody wants to be restrained—they want their liberty; and every time I go through the wards some patient will say to me, "Doctor, when are you going to put me in that open ward?" And I say, "Whenever you show that you can take care of yourself and control yourself and no longer need to be restrained, I will be glad to put you in the open ward." It makes the patients co-operate with the doctors and nurses to get in the open ward.

Then when they get there they ask, "Doctor, when are you going to send me home?" And I reply, "When you show that you can stay in the open ward without restraint and confinement, when you no longer need supervision and can take care of yourself, then you can go home." That makes the people in the open ward co-operate with the people there so they may go home.

A dentist comes along during this time the patient is in bed and makes a complete observation and examination of the mouth and what is necessary, and if there is work in his line to be done it is done. Of course, a great majority of these patients have unsanitary mouths. We have put in an X-Ray machine and it has paid for itself time and time again in getting patients away from the hospital.

I recall one patient, an old man, a preacher. He was sixty. For years he had been nervous and unable to control himself, and they finally sent him to the hospital. The doctors said they could find nothing physically wrong with him, but the X-Ray showed two abscessed teeth. These teeth were removed and in sixty days his mind cleared up and he was sent home and is now preaching the Gospel and saving human souls. Had it not been for the X-Ray machine that man would have stayed in the institution the balance of his life because we would not find the cause of his trouble.

Another instance was that of a school girl sent to the institution. She was in perfect health physically, but the X-Ray showed two wisdom teeth pressing on a

nerve. They were removed and in a short time she went back home well and is now happy and contented.

There are many things that bring on insanity. We examine the tonsils of these people and very often find them diseased. One woman last year was confined in a private institution in an adjoining city—she had been there eighteen months and the doctor told her husband that she was incurable, and having spent all the money he had and believing she was incurable, he brought her to the State Hospital. An examination showed her tonsils to be diseased. They were removed, and in about three months her condition cleared up and she has been at home now for eight months, completely restored and happy and contented. Without the removal of her tonsils she would probably have remained in the institution the balance of her life.

It is just such instances as these that are producing insanity in the people back home. Speaking of hookworm, we had a woman sent to us who for more than a year was going down and as result of her physical condition her mind became unbalanced and she was sent to the institution. Laboratory tests showed hookworm. We gave her treatment. She began to clear up at once and to gain weight, and she left the institution a few months later completely restored both physically and mentally. These are conditions that send people to the Hospital for the Insane, and sometimes after thorough examination we are able to send them back well.

But I had not been in that institution long before I found that the people who gave the least trouble and got well quickest were those who had employment. We were able to give many of these people work in the yards and lawns, workshops, dairy, carpenter shop, and some other places; but there were a vast majority that we could not give any freedom. They had to be confined in the wards. We would find them leaning against the wall, standing with their faces to the wall, sitting on the floor tearing their clothing, muttering and cursing and as unhappy as it is possible for human beings to be. It seemed to me if we could give these people employment they would be benefitted, so I went to Philadelphia and there secured an able and qualified woman to come down here and put these people to work. She had classes—people doing something all the time—cutting pictures out of magazines, making baskets and thinks of that kind.

I remember one young woman who had

been there for several years when I went there. Every morning she was found sitting on the floor tearing her clothing, muttering and unhappy. If you spoke to her she would answer with oaths. We sent that young woman to this class. She would not go, so they carried her. She refused to do anything, but she was taken to the class each day and finally this woman induced her to tear up tow sacks; then she was induced to put these strands together in a ball, and after a while she was taught to weave these strands into rugs. That patient is so far improved that she is in the class every day—she is waiting at eight o'clock in the morning, and she is the last one to leave in the evening. If you ask her how she is getting along she will answer with a smile and say she is getting along nicely. This demonstrates what occupation will do for those people out there. We would be glad to have the doctors visit our institution. Mental diseases are just like physical diseases.

One thing I might mention about the patients who are sent back home. If they are sent back to the same surroundings many times they return to us. Suppose a man was infected with malaria and you sent him to a hospital, the doctors eradicate the malaria; but if you allow him to go back to the same surroundings, to a swamp, no screens to protect from mosquitoes, he is soon reinfected and comes back again with malaria. So it is with mental diseases. We turn these people out and send them back home, and if we do not tell what the cause of the trouble is they may go back to the same environment and surroundings that caused their downfall, and it is just as natural for them to come back as the man with malaria. So we have a social welfare worker who follows our people, tells them the cause of their trouble and how to take care of themselves at home, if necessary gets them into other communities, or gets them different employment, and in this way we feel that we will keep many of these people from ever coming back to us. But I want to say to you that because of the reduction of our support funds it has become necessary for the next two years to do without this very efficient woman, and I regret to say that we will be unable to take care of these patients by following them after they leave the institution.

I want the doctors of Mississippi to be interested in our institution. If the doctors of Mississippi would get behind the institution and would create in your communities

a sentiment that will demand that the Legislature properly take care of these people it would help us a great deal. If the doctors will take an interest the Legislature will see that these people are humanely cared for.

I have somewhere read that when God made man he called together Truth, Justice and Mercy, and turning to Truth, he said, "Shall I make man?" and Truth replied, "O God, make not man; for he will bear false witness against his neighbor" Turning to Justice, he said, "Shall I make man?" And Justice, with flowing robes and holding in her hands the scales which measure good and evil, said, "O God, make not man, for he will not be just to his fellowmen." Turning to Mercy he asked the same question—"Shall I make man?" And Mercy, in her spotless robe, replied, "O God, make man; for, although Truth may be withheld, although justice may be denied, yet will I put my arm around him to protect him." So God made man.

So my friends, I beg of you, if Truth will not give these people what they are entitled to; and if Justice will not demand their rights, then for Mercy's sake let the doctors see that the insane are humanely and mercifully cared for.

#### DISCUSSION

Dr. W. S. Leathers (University): I think the people of Mississippi owe a debt of gratitude to Dr. Mitchell for the splendid service which he has rendered as head of the State Insane Hospital. He has certainly been a great benefactor to this state, and I believe that every doctor present should have a sense of pride in the accomplishments which are evident under his efficient administration.

I was very much pleased with the line of argument which he made from the point of view of the splendid institution over which he presides. It was a clear-cut argument for better public health conditions. He indicated that if we are to prevent insanity, it is necessary to prevent disease because the examinations which have been made of those which have been admitted to that institution indicate that a considerable percentage of insanity was due to some diseased condition. The reference to hookworm disease as a basis of insanity was exceedingly interesting and also the young woman who had defective tonsils. How much better it would have been had these individuals been examined when the conditions were in the incipient stage, rather than permit the disease to progress to such an extent as to cause insanity with its attendant discomfort and humiliation. I am convinced that there is no more important problem for the medical profession in the future than advocating and organizing so as to have the citizenship of the state appreciate the advantages accruing from an annual health examination. If the physician teaches his clientele to come for a physical examination at least once a year, a great many physical defects would not only be prevented but



chronic conditions avoided. The physicians individually and collectively should be looked upon as the guardians of the health of the people and when this is done more uniformly than at present, a great deal of the physical inefficiency which now prevails from disease will be prevented. I am confident that the individual doctors should assume more and more responsibility for the health of the people, generally speaking, and there is no reason why he should not charge for such service. When the physicians appreciate more fully their responsibility from the standpoint of preventive medicine, the profession will constitute the greatest health conserving agency in the country, and will serve to re-enforce at every step the effort which is being put forth by public health organizations for the prevention and control of disease and the raising of health standards.

Dr. Oscar Dowling (New Orleans): I would like to add my appreciation of the splendid talk of Doctor Mitchell. It is worth a trip to New York and back to have heard it. I have made some observations along this line, and I am convinced that if the physician made more efficient diagnosis there would be fewer inmates of our hospitals for the insane.

I would also like to emphasize what Doctor Leathers mentioned in his last sentence—that when the people receive this service they should pay the bills, and they will pay if the doctors will render the service.

#### APPENDECTOMY UNDER LOCAL ANESTHESIA\*

R. B. WALLACE, M. D.,  
ALEXANDRIA, LA.

Formerly, major operative procedures under local anesthesia were largely because of necessity, the patient being markedly debilitated from, or suffering with such systemic disturbances as thyroid intoxication, diabetes mellitus, renal or cardiac insufficiency, et cetera; these continue to be indications for its use.

The good results obtained in these physically handicapped cases have given rise to the employment of local anesthesia in practically every surgical field, and it is now chosen by many surgeons by preference unless contraindicated.

The following is based on my experience in the use of local anesthesia in appendectomy in Alexandria during the past several years: If appendectomy is the sole indication, then local anesthesia may be well selected in a majority of the chronic and sub-acute cases, as well as in the early diagnosed and operated acute cases. Even many gangrenous appendices may be removed under local.

One important consideration is the location of the appendix, base and tip. One located retro-cecally and high up, places

the operator at a disadvantage, as well as some of them in the pelvis. Very frequently the location of the appendix may be ascertained by physical examination in the chronic, sub-acute and early acute cases; this is useful knowledge as it indicates to some extent the requirements of the incision, viz: high, low, long or short.

Another important point is either the pathology or abnormalities of the appendix and meso-appendix existing. If either the meso-appendix is very short or firm adhesions are present, elevation of the appendix and its removal are difficult. A retro-cecally placed appendix with adhesions may not be well removed under local. Delayed removal, presenting a distended appendix and an infiltrated meso-appendix may produce too much pain to manipulate them. Ruptured cases with removal of the appendix should have general anesthesia, but if drainage alone is the indication, local anesthesia is well selected. Children are better subjects for general anesthesia. While speaking concerning ruptured appendices with peritonitis, I believe that when the laity will finally appreciate that appendicitis is strictly a surgical disease, and that all chronic and sub-acute cases should be operated early, and that all acute cases should receive surgical attention immediately, then, and not till then, will surgery fulfill its mission in the treatment of appendicitis, reducing mortality and unnecessary morbidity.

The advantages of local anesthesia over general are many. (a) The fear of the taking of the anesthetic is absent with the patient, and many more will be operated if this is removed. The fear of the possible consequences are absent with the surgeon such as respiratory and cardiac depression, ether pneumonia, nephritis, et cetera. Fortunately, these do not occur often, but every surgeon has had one or more of these. (b) The time of the operation is not an element with local, yet there may be but little difference in time consumed as it requires from ten to twenty minutes to produce narcosis with the general, and probably no longer time to enter the cavity with local, the surgeon and assistants being scrubbed and gowned by the time the patient is brought into the operating room. (c) The patient is returned to bed awake, usually feeling well enough to talk freely, and frequently will joke about the operation; there is no joking when an anesthetic is taken, as I have experienced. (d) There is diminished vomiting or it may be absent, which greatly diminishes pain. (e) The

\*Read before the Louisiana State Medical Society, Opelousas, April 23, 1924.

stay in the hospital is very much shorter, and the patient is anxious and usually easily able to go home in the ambulance on the fourth day. There is no anesthetic fee, and special nurses are usually not demanded. These are important economic points with many people. (f) The patients and relatives praise this advance in surgery. (g) All tissues must be more carefully manipulated which favors the healing process. (h) The patient may have water early.

As a preliminary to appendectomy in chronic and sub-acute cases, Dr. Meyers has been of great service to me. A few days prior to the operation (or it may be done the day before, in out-of-town patients) the patient is given a barium meal at bed-time and we see him the following morning. Under the flouroscope we observe the position and mobility of the cecum as well as the appendix. This determines before hand if a certain case is suitable for local; with an easily moveable cecum, local is indicated in practically all cases, even though the appendix may be in the pelvis or posterior to the cecum. If the appendix is normally placed, and though the cecum is not very moveable, most of these may be removed under local. Surely we realize that no rule will always be infallible, and a general anesthetic of ethylene or nitrous oxide, or ether may be required to elevate the appendix. Often this is all the anesthetic required, and the remaining steps may be completed under local.

#### *Technique*

The usual preliminary preparations are observed, and the patient may enter the hospital on the morning of the operation. I find many of them more composed when this is done. An hour before operation, the patient is given a hypodermic of morph. gr. 1-8 and scopolamin gr. 1-200; this hypo is repeated immediately before he is brought to the operating room. This plan not only produces mental relaxation before the operation, but during it as well. Even a very nervous or fearful patient will be quite co-operative. A nurse sits at the patient's head and holds his hands and moves his arm a little if he becomes tired. Procain, butyn or any of the approved local anesthetics are used with a few drops of adrenalin solution to the ounce. The anesthetic solution is then injected both intra- and sub-dermally.

The skin incision is made, and when the fascia is seen it is infiltrated and incised. Employing the right rectus route, the rec-

tus muscle is now observed presenting one or more tendinous intersections (the lineae transversae), the most noticeable being about opposite the umbilicus. If the muscle is retracted, a liberal amount of anesthetic solution should be injected at this point. Any nerves observed should be infiltrated. It is well to double clamp at the tendinous intersections if the muscle is retracted, as a vessel there usually causes troublesome bleeding. A small area of the peritoneum is then infiltrated and incised. Under inspection the entire length of the incision is infiltrated, and as much of the length as is required is incised. By this method there is less likelihood of penetrating a part of the bowel which may be in close contact with the peritoneum. The appendix is sought and delivered, however, much more carefully than when under general anesthetic. It is interesting at this point to make a little traction on the appendix; the patient will complain with pain in the epigastrium. When asked where it hurts him, he will reply, "In my stomach." This aids us in understanding why sub-acute and chronic appendicitis produces gastric disturbances. The meso-appendix being sensitive, a little anesthetic solution is introduced into it, and then the further steps are as usual.

#### DISCUSSION

Dr. Thos. B. Sellers (New Orleans): I cannot agree with Dr. Wallace in saying that the location of the appendix is possible in a large percentage of cases. We get many surprises when we open the abdomen. It is impossible to explore the abdomen under a local anaesthetic. So often we find gall bladder involvement, ureteral stones; and in the female, gynecological conditions that either are not causing symptoms, or maybe confused with appendicitis.

Crile has demonstrated to us that the use of local and a very light nitrous oxide and oxygen or ethylene gas anaesthetic will enable us to operate with ease and explore the abdomen, and the patient will awaken before leaving the operating room. It is necessary to handle the tissues with care when you use nitrous oxide and oxygen.

I believe that local should be only used when there is a definite contra-indication to a general anaesthetic, or if the patient refuses to take a general anaesthetic.

Dr. R. B. Wallace (closing): I thank Dr. Sellers for his discussion.

As I stated in the beginning, this method selected, has to do with cases diagnosed as appendicitis only.

I believe the position of the appendix can be located; I know it can in many cases, with the use of the flouroscope, and a study of the appendix under it is most interesting. You can do it in either the sub-acute or chronic cases. General anesthesia is a nice adjunct if required, but I believe local anesthesia in a majority of selected cases is most satisfactory.

INSULIN IN THE TREATMENT OF  
NON-DIABETIC ACIDOSIS\*

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For years much study, research and investigation has been conducted with a view toward relief for the diabetic, until at last the discovery of insulin makes it possible for many to live an uninterrupted life. The Toronto investigators, I dare say, had no idea insulin was or would be of value in conditions other than diabetes. However, with the stimulation produced by the success of this drug in combating diabetic acidosis, investigations show similarly striking results in handling non-diabetic acidosis.

Acidosis is a not infrequent complication to many diseases and situations, which have proved most vexing problems for both the surgeon and internist. The true nature of acidosis is even now problematical, but it is known that an insufficient utilization of carbohydrates to produce complete oxidation of fats will result in the formation of by-products of fat combustion,—acetone, diacetic acid, oxybutyric acid, etc. In the diabetic there is an altered carbohydrate metabolism and a state of acidosis follows. Here insulin controls the glycosuria, hyperglycemia, and readily relieves the acidosis. It would then seem that an altered carbohydrate metabolism is essential to the formation of acidosis, and insulin supplies the factor which is lacking to bring about the complete utilization of carbohydrates. Disease is not the fundamental in the production of acidosis, but any state causing inability of the body mechanism to utilize properly sufficient carbohydrate completely to burn the necessary fat will produce acidosis. Therefore, an altered metabolism caused by insufficient carbohydrate intake (starvation) will, and does produce such a state.

It was the successful treatment of diabetic acidosis which led to the use of insulin in the treatment of acidosis of non-diabetic origin. Insofar as it is possible to ascertain Thalheimer (1) was the first to report this use of insulin and his results have caused others to take up the investigation. The profession has for a time used glucose in combating post-operative acidosis, but this has met with varying degrees of success; oftentimes favorable, again un-

favorable. Impressed with this uncertain success, in the administration of glucose alone, it was decided to combine insulin with the glucose in those non-diabetics coming under my care.

Since April of this year, ten cases of acidosis, one case of severe vomiting and malnutrition without acidosis, and three cases of acidosis of toxemic vomiting of pregnancy were treated with insulin and glucose, and two cases of acidosis treated with glucose alone, compose the series from which these observations are reported.

Case No. 1.—The first non-diabetic to whom insulin was administered was an adult white male forty-eight years of age, upon whom an enterostomy had been performed for intestinal obstruction four days previously. This gave no relief and the patient was a picture of malnutrition. There was continual vomiting and the brow was cold and clammy. In a desperate effort to relieve the situation, at 8:30 p.m. under local and mesenterial anesthesia a resection of 30 inches of ileum with entero-enterostomy was performed. The general condition was extremely poor. Immediately an infusion of 500 cc. 5 per cent glucose and ten units of insulin were given hypodermically. A hypodermoclysis of 500 cc. of saline was also administered.

The patient rested well and retained water and coco-cola. There was no vomiting or hic-cough.

On the second post-operative day the infusion of glucose and insulin was repeated. A blood sugar now showed 52.6 mg. per 100 cc. of blood, so 500 cc. of 5 per cent glucose were given by vein, which brought the blood sugar to 83 mg. per 100 cc.

The convalescence was uneventful with no vomiting after first administration of glucose and insulin.

Case No. 2.—A little white girl, four years of age, well developed, with flushed face and appearing ill, giving a history of acute appendicitis of forty-eight hours' duration, verified by physical findings and a large gangrenous appendix was removed. A peritonitis was encountered and drainage instituted. Vomited in the evening but following morning, after a good night, appeared bright.

The second and third days were stormy, being marked by extreme restlessness, abdominal distention and incessant vomiting. The fourth day the pulse was 170, respiration 12, temperature 102. At 2 p.m. she was in extremes—pale, pulseless, eyes sunken and rolled beneath upper lid, unable to be aroused. Air hunger was present and a heavy acetone breath was experienced. Immediately 400 cc. of 5 per cent glucose with five units of insulin were given intravenously and upon completion of infusion, an additional ten units of insulin were given subcutaneously. The immediate effect of this procedure was both surprising and gratifying, as the child, before the completion of the infusion, brightened, conversed with her mother and recognized persons about her. One hour later the pulse was stronger and general condition improved. Rested, slept and retained water.

After six hours an infusion of 500 cc. five per cent glucose was given with subcutaneous injec-

\*Read before the Orleans Parish Medical Society.  
November 10, 1924.

tions of five units of insulin both at its commencement and termination.

Two hours later under local anesthesia a jejunostomy was performed for relief of abdominal distention. Slept all night.

At 7 a.m. the following morning the infusion of 500 cc. of glucose with ten units of insulin was repeated. Nourished—convalescence from this on was uneventful.

There was no vomiting from the moment of first administration of glucose and insulin. The improvement was immediate and acidosis promptly disappeared. This case presented a most spectacular response, and I feel her life has been spared by the procedure.

Case No. 3. A white male, 19 years of age, suffering from acute appendicitis. He appeared quite sick and was dehydrated. The breath gave a heavy acetone odor, urine showed acetone four plus, and diacetic acid one plus. This patient was treated by hypodermoclysis of 1,000 cc. of glucose (5 per cent) twice daily for six days before the acidosis cleared. No insulin was given in this case.

Case No. 6. A white adult male, 66 years of age, very much emaciated, with marked acetone breath, suffering from heavy ascaris infection, in whom the urine showed acetone four plus and diacetic acid three plus, was treated by hypodermoclysis of 1,000 cc. of 5 per cent glucose once and twice daily (without insulin). He was cleared of acidosis after six days.

This is a case of starvation acidosis in an old gentleman produced by incessant vomiting and insufficient carbohydrate intake.

Case No. 4—A white male child eleven years of age, suffering from acute appendicitis of twenty-four hours' duration, was dehydrated and looked very ill. Blood count—whites, 11,000—N. 84 per cent. There was neither acetone nor diacetic acid in the urine.

Given hypodermoclysis of 500 cc. 2 1-2 per cent glucose and after a few hours looked much improved. Under local anesthesia the abdomen was opened and with aid of little ether a large gangrenous and ruptured appendix removed and drainage instituted.

During the following four days retained very little nourishment. On the fifth post-operative day, in spite of repeated administration of 5 per cent glucose subcutaneously by rectum, and one infusion, there was acetone odor to the breath and acetone present in the urine.

An infusion of 400 cc. of 5 per cent glucose was given with administration of ten units of insulin hypodermically, supplemented by 500 cc. of 2 1-2 per cent glucose as hypodermoclysis. After three hours there was a trace of acetone in the urine and only a faint odor to the breath.

Patient vomited and this was believed to be caused by a large worm found in the vomitus.

Two hours later, received 500 cc. of 5 per cent glucose by hypodermoclysis. Retained water freely and had the first good night with no nausea or vomiting. The following morning there was neither acetone nor diacetic acid in the urine. Retained water and orange juice. At 7 p.m. there was a slight trace of acetone in urine so an infusion of 300 cc. glucose 5 per cent was given with ten units of insulin subcutaneously which cleared acetoneuria. Convalescence from here uneventful.

This is a case of post-operative acidosis produced by vomiting, and lack of sufficient intake

which showed no improvement from glucose alone given subcutaneously and intravenously. However, there was striking and continued improvement following the first infusion of glucose combined with insulin.

Case No. 7—A white female fifteen years of age upon whom an emergency splenectomy and gastrorrhaphy was performed for gunshot wound of the abdomen rupturing the spleen and severing the splenic artery with much associated hemorrhage. During the operation 1,000 cc. of saline were given as infusion, and 500 cc. of compatible blood as transfusion upon arrival at the ward.

One a.m. the following day there was acetone breath. Hypodermoclysis of 5 per cent glucose was given.

The second day there was strong acetone breath and acetone three plus in the urine. Ten units of insulin were given subcutaneously followed by 500 cc. glucose 5 per cent as infusion. She slept well and retained water and orange juice. An additional 500 cc. of glucose was given under the skin.

3:40 p. m. Infusion of 300 cc. of glucose 5 per cent and 5 units insulin given subcutaneously.

9:30 p. m. Urine showed trace of sugar with no acetone or diacetic acid. There was marked improvement in general condition. The following morning the urine still contained sugar so an additional five units of insulin was given.

Convalescence uneventful.

This patient developed acidosis while receiving glucose both by rectum and subcutaneously, and only became acetone free after supplementing the glucose with insulin; from which time the improvement was marked and continuous.

Case No. 8—A white male seventeen years of age giving a history of acute appendicitis of 72 hours duration associated with much vomiting. He appeared quite ill, was emaciated and dehydrated—Total whites 15,000, N. 84 per cent. There was acetone breath and the urine possessed acetone three plus, diacetic acid one plus, indican and casts.

The abdomen was distended and tympanitic throughout. No rigidity was present but intense pain was elicited over the appendical area.

This was a very poor operative risk. A hypodermoclysis of 1000 cc. glucose 5 per cent with subcutaneous injection of twenty units of insulin cleared the state of acidosis after four hours.

Was now operated and a ruptured appendix removed, with drainage. Vomited once after ether. Slept well and retained liquids. Convalescence unaltered.

This is a case of acidosis, the picture of low resistance, transformed from poor into a favorable operative risk.

In the American Journal of Obstetrics & Gynecology for Sept. 1923, Williamson (3), has found there occurs a decline in the blood plasma CO<sub>2</sub> combining power as pregnancy progresses, showing a change in metabolism towards acidosis.

In the vomiting of pregnancy we get a further alteration in the metabolism due to inability to take sufficient carbohydrate, thus aggravating the tendency towards, and even producing a state of acidosis from starvation. Harding & Potter (2) have treated successfully vomiting and ketosis of pregnancy by glucose alone taking five to six days to clear up. Thalheimer (4) reports successful treatment of five cases of toxemia and vomiting of pregnancy by glucose and insulin.

In this series three cases of Toxemic Vomiting

of pregnancy have been observed with complete cessation of vomiting and relief of symptoms in two. The third is now in the hospital, vomiting and acidosis have cleared.

Case No. 12—A colored female, 28 years of age, three to four months pregnant, suffering from toxic vomiting of pregnancy of few days duration. Vomiting and symptoms relieved by one infusion of 500 cc. glucose 5 per cent supplemented by subcutaneous injection of ten units of insulin.

Case No. 9—A colored female, 29 years of age, eight months pregnant, suffering from the toxic vomiting of pregnancy of three days duration. Urine showed no sugar but heavy acetone. Blood sugar 91 mg. per 100 cc.

1:00 p. m. 1000 cc. glucose 5 per cent as hypodermoclysis and fifteen units of insulin subcutaneously.

9:00 p.m. Glucose and insulin repeated—a good night.

Following morning urine showed slight acetone. Blood sugar 110 mg. per 100 cc.

At 4:30 vomited and 500 cc. glucose 5 per cent given as an infusion preceded by fifteen units of insulin. Spent a good night and did not vomit.

On the second morning there was trace of acetone in urine with the presence of sugar. Blood sugar 110 mg. per 100 cc. An infusion of 500 cc. glucose 5 per cent was given with twenty units of insulin by vein.

On the fourth day there was no sugar, acetone, or diacetic acid in the urine. The vomiting was relieved and the patient deserted.

Case No. 14—A young white female about two months pregnant who had vomited for three weeks. When first seen eleven days ago she was comatose, pulse weak and thready. There was slight air hunger and strong acetone odor to the breath. Urine examination showed heavy acetone and diacetic acid.

An infusion of 1000 cc. glucose 5 per cent with subcutaneous injection of twenty units of insulin at its commencement and ten units at its completion was given. The following morning the urine contained sugar and acetone, but no diacetic acid.

At 10:30 a. m., infusion of 500 cc. glucose 10 per cent with fifteen units of insulin before and after. There was trace of sugar and acetone.

7:30 p. m., 500 cc. glucose 10 per cent with thirty units of insulin.

The following morning urine showed neither sugar, acetone, nor diacetic acid.

There has been no vomiting since admission to the Hospital, and the urine has been free of acetone and diacetic acid following the second infusion of glucose and insulin.

Notwithstanding the fact that the acidosis has cleared, this patient is severely ill and the final outcome must be awaited.

In conclusion it would appear that a lowered carbohydrate metabolism or insufficient intake of carbohydrate is essential to a state of acidosis (case 6).

Acidosis may develop while patients are receiving carbohydrates by rectum, skin, and vein. (case 7).

The administration of glucose will clear up certain cases of acidosis, but this is uncertain and unreliable. (case 3).

Insulin insures the ready utilization of carbohydrates supplied either by mouth, rectum, skin, or vein, as evidenced by the rapid improvement after its administration. The intravenous administration is the most efficacious. (case 2).

Insulin supplementing the administration of glucose, is specific for the acidosis of starvation, (preoperative and post-operative) and the acidosis of toxic vomiting of pregnancy.

In this method we have a most valued, rapid and practical procedure for handling acidosis. It is safe from the practical clinical standpoint, giving one unit of insulin for each two grams of glucose administered. This should be guarded by repeated blood sugar determination, in the severe cases.

The administration of insulin and glucose may be employed as often as required.

This procedure often transforms a poor into a more favorable operative risk (case 8).

The successful use of insulin and glucose in one case of post-operative malnutrition without acidosis, suggests its trial in others.

This procedure has in no case failed to clear the state of acidosis.

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### DISCUSSION

Dr. Allen C. Eustis: There is little I can add to what has been said. I have already congratulated Dr. Irwin personally. It is very gratifying to one who has seen the development of the treatment of acidosis to see the surgeons taking an interest in this important subject. So often the surgeon operates and turns the dietetics over to the nurse. It is especially in these post-operative diets that we can learn from the dietitian that the nutriments are uniformly far behind the requirements. The protein and fat are usually in excess, with paucity of carbohydrates, thus predisposing to acidosis.

Dr. Irwin spoke of the acid bodies coming from fats. The importance of considering proteins in this relation should not be overlooked because 42 per cent of the protein goes to form these acid bodies. Glucose, which is one of the carbohydrates, goes through the liver and is instrumental in forming complete oxidation of these substances. The operator should learn that the chief nutriments in post-operative cases should be carbohydrate. The first thing we get after an operation is protein, milk and egg albumin water, when the diet is left to the discretion of the average nurse.

Dr. E. D. Fenner: I have listened with much pleasure to the paper of Dr. Emmett L. Irwin on the subject of the treatment of acidosis. I do not know whether the majority of this audience recalls with as much interest as I do the old teaching in

regard to the cause of acidosis. At one time there was no question in the medical mind but that the sole cause of acidosis was an absence of alkalies, and the only treatment, huge and repeated doses of alkalies in the form, usually, of bicarbonate of soda. Embracing a period of less than ten years ago, the above theory and treatment were accepted and practiced throughout the United States. A very considerable per cent survived this vigorous method of treatment. But many times I have witnessed this treatment carried out with less fortunate results. Huge doses of soda were poured down their throats, which was followed by vomiting; each repetition of the medication bringing them closer and closer to, and finally passing them thru, the portals of Death. The medical records, during this period of vigorous alkaline therapy, are full of reports of local epidemics of fatal acidosis which appear to have been closely associated with an endemic enthusiasm for the application of soda saturation for the cure of the condition.

Whenever I have encountered a fact, absolutely in contradiction to a widely accepted theory, I have concluded that the best thing to do was to discard the theory and accept the fact. So I entered as strong a protest as possible against the then accepted soda therapy for acidosis. It is therefore with great satisfaction that I have found my non-scientific, but practical conclusion, that soda in sufficient dosage will kill a child who might recover if given a peppermint stick, accepted. Only in the older text books will you find its use advocated, and today but few cling to the belief that it is the proper treatment for acidosis.

I had the privilege of seeing some of the cases demonstrated by Dr. Irwin, and I wish to state that their desperate condition was not emphasized by him as it was truly deserved, nor was the marvelous result of the treatment fully brought out.

This shows us how we can go thru a cycle, and that we may have a perfectly good, sound theory without a bit of sense in it, but that some day we arrive at a real treatment that brings results.

Once again I wish to state it has been a tremendous pleasure to me to hear Dr. Irwin's paper.

Dr. Maurice J. Gelpi: In connection with Dr. Irwin's method of treatment of patients, I wish to make known the outcome of my limited experience along this line. Having had occasion to witness the brilliant results obtained in several cases, I was induced to try it on three recent occasions.

First—A case of starvation following enterostomy, of three months duration.

In spite of hypodermoclysis and proctoclysis, acidosis was most pronounced and the patient almost in coma. We started this glucose drip and gave the insulin as outlined by Dr. Irwin. Before the treatment was over the patient was asking what the wonderful thing was that we had given her.

Second—A case of acidosis and profound sepsis following nephrectomy for pyonephrosis.

The treatment was similar—proctoclysis, hypodermoclysis—glucose had been used. We increased the glucose, gave the insulin, and again the result was striking.

Third—A case of partial obstruction following laparotomy.

Saturday (November 9th) I saw this case. She was profoundly toxic, with pronounced acidosis. The case was so bad I hated to do anything in a surgical way. Again I had recourse to the insulin treatment and this morning I felt justified in doing an enterostomy.

I take this opportunity of urging those, and in particular the surgeons, who are not familiar with this treatment, to give it a trial in desperate cases. With my limited experience, I can say that I recommend it most highly.

Dr. I. I. Lemann: I am not given to empty compliments for I think them a waste of time—Dr. Irwin's paper calls for more than a perfunctory, empty compliment. He has presented a truly scientific paper. His facts have been marshalled in such a way as to carry conviction. He has presented a series of cases which illustrate practically every point that can be brought out in the treatment of acidosis—with glucose, and with glucose supplemented by insulin. He has conducted his series as one might conduct a series of tests in a laboratory.

I venture to stray from the discussion of Dr. Irwin's paper to say that this illustrates what can be done by a doctor as a scientist. We often think that it is only the laboratory man, the man who deals with guinea pigs and rabbits, who can give really scientific information. We need not experiment with our patients; all we need to do is to set down the observations based upon practice. When, for the relief of our patients, we set down our scientific observations, we can make deductions just as true as we can from guinea pigs and rabbits, and with this advantage, that many of the things which we observe in lower animals cannot be translated into terms of human application; therefore observations based upon beings are much more valuable and illustrative than the findings of the laboratory.

There are several things in the treatment of these cases with glucose and insulin to which I wish to refer. Primarily, I wish to call attention to the fact that we need not be afraid of an excessive amount of glucose. I know that Dr. Irwin took particular pains to point out that after the administration of glucose and insulin there was no sugar in the urine, nor was there blood sugar above the normal.

What we need to fear is an excessive amount of insulin, be sure to err on the safe side and give more glucose than is absolutely necessary to offset the insulin. The patient is not depending upon the absorption of all the glucose. If we give more glucose than is necessary for the combating of the acidosis, this can be taken care of by the kidneys. We are doing no harm if the surplus flows out thru the urine, but if, on the other hand, we have given more insulin than we have given glucose to offset it, we may have the condition that Dr. Irwin mentioned in one of his cases, viz: the sinking of the blood sugar below normal, 53 mg., and we might carry the use of the insulin to a danger point. I think that the ratio of two grams of glucose to one unit of insulin should be the minimum and would not be afraid to use three grams. That is quite the opposite of the condition in a diabetic patient: there we should give more insulin, less glucose, if we give glucose at all. We may venture, with a diabetic, to use one unit of insulin for every gram of glucose, or insulin without the glucose.

The description that Dr. Irwin has given of the dramatic disappearance of the acidosis symptoms and the control of the vomiting is on a par with all the rest of the phenomena observed in connection with insulin. The marvelous come-back obtained thru the administration of glucose in hypoglycemia after the excessive use of insulin is equally dramatic. One need not be afraid then,

even when we have an excessive amount of insulin, if prepared at once to give the antidote of glucose. On several occasions now I have seen the dangerous condition of insulin shock, all of them dramatic; all of the patients come back at once, within a few minutes after the introduction of glucose in the vein—it is far more dramatic than the description given by Dr. Irwin. Excessive glucose should be given, but one need not on the other hand be afraid of insulin, because he has in his hands the absolute control of its excessive use.

I merely wish to mention Dr. Joslin with regard to the administration of soda in the treatment of diabetic acidosis. Ten or twelve years ago, long before the era of insulin, he aligned himself as an anti-soda advocate, and showed then cases of diabetic acidosis which were rescued without a bit of soda.

I have followed Dr. Joslin's teaching and have not used any soda for many, many years.

To Dr. Joslin the death of soda therapy is largely due. It has died a very slow death, however, for even to this day there are some who still use soda.

Dr. J. B. Guthrie: Dr. Irwin's paper is an important one and his conclusions are correct. You will notice that Dr. Irwin did not mention anything about sodium bicarbonate. It is important to recognize that most cases of acidosis can be treated best by leaving it out. I think that one conclusion that Dr. Irwin seemed to draw, and that he emphasized, is the importance of insulin and carbohydrates in the treatment of acidosis. He gave relatively very large doses of insulin. Perfectly correct and absolutely safe, for a non-diabetic. I am sure, that when everything is prepared to administer and the patient is going to get 50 grams of glucose (1,000 cc.) subcutaneously it is perfectly safe to give 25 units of insulin. When giving it by hypodermoclysis, you know he has received the glucose. If an excess of insulin is given, as evidenced by his blood sugar, this can be easily corrected by increasing the carbohydrates. It seems to me that there was in Dr. Irwin's series perhaps an unnecessary repetition of hypodermoclysis.

Dr. Irwin is a surgeon, and this did not impress him so strongly perhaps, but day in and day out, 1,000 cc. is a little cruel.

He has also omitted mention of the importance of fluids. We should certainly see that fluids are given and that we are not reducing the blood sugar. The doctor is neglecting the fluids given by other routes and depending too exclusively on the surgical measure.

There is no doubt that we are on the right track, as proven by these cases. We have succeeded in scaring ourselves and scaring the profession about insulin, which was necessary at the beginning of the insulin work. We now know how to control the case no matter what the blood sugar. We are perfectly safe in giving the patient insulin providing two grams of glucose is given to every unit. If you want to make doubly sure, increase it to three and then there is no risk whatever. The word of caution we give to a diabetic is to see that he must get his meal within a half-hour. This of course, is unnecessary in a case of non-diabetic where hypodermoclysis of glucose is given.

I believe that many lives can be saved in infectious conditions like typhoid and particularly pneumonia by the combination of water, insulin, and glucose.

Dr. J. A. Lanford: I wish to say something

about an opposite condition to acidosis, which is being recognized more now than it has in the past and for which surgeons should be on the look-out, viz: Alkalosis.

Symptoms simulating acidosis develop in cases that have been operated upon for conditions involving the liver or the gall-bladder, even instances are recorded in which a simple cystotomy was done. These cases occasionally have been given alkalies or glucose and insulin which is the wrong thing to do because in such conditions the addition of alkalies and more carbohydrates add to the trouble. The surest and most positive diagnosis of a condition of alkalosis is reached by determining the CO<sub>2</sub> combining power of the blood plasma, which occasionally rises as high as 98 as compared to a normal around 55 to 60.

Dr. Emmett L. Irwin (Closing): I am appreciative of the value of the administration of fluids in these cases. It is a very important factor, but if it is recalled, the cases presented were of types who were not retaining nourishment by mouth and as a result there were but two routes by which we could administer—subcutaneous and intravenous.

In these cases, some were of appendicitis and its complications, being prepared for operation; others were post-operative and acutely ill. The object in all was to rid them of the acidosis as rapidly as possible. I presented some cases which received only glucose (without insulin) and in these, five days were required to rid them of the acidosis. In these particular cases (post-operative and pre-operative) it was necessary to adopt some more expeditious method.

When the doctor arose and began to speak of the types of vomiting in pregnancy, I had hoped he would outline for us from the obstetricians view point the differentiation between these. However, it matters not the type of vomiting, the result is the same;—vomiting, lack of sufficient intake, starvation and acidosis—this is relieved by administering glucose with insulin.

It is impossible for me to express my feeling of gratification at the spirit with which this paper has been received, and all I can say is, I sincerely thank each of you for the very kindly remarks in your respective and valued discussions.

## SYRINGOMYELIA AND POSSIBILITIES TO BE LEARNED FROM ITS PATH- OLOGY IN REGARD TO NEURO- SURGERY

JOHN DALTON YOUNG, M. D.,  
SHREVEPORT, LA.

In choosing this subject I have done so with the object of bringing about a closer co-operation between the gynecologist, the general surgeon, the radiologist and general practitioner with the neurologist.

The primary cause of patients seeking our help is for relief from pain in some manner or form and it is our duty, if possible, to give them this relief.

Syringomyelia means tubular formation

\*Read at the meeting of the Louisiana State Medical Society, Opelousas, April 22, 1924.

in the spinal cord. These begin probably first as a slow progressive growth of the central neuroglia with invasion of the posterior spinal grey columns accompanied by cystic degeneration and cavity formation.

The order of the parts invaded usually is as follows:

First—The posterior grey columns and grey commissure.

Second—The anterior grey columns and the anterior white commissure.

Third—The white columns very late or not at all.

It is usually bilateral, but may be unilateral in the early stages. It occurs most frequently in the cervical enlargement, but no part is immune from the Bulb to the Conus Medullaris.

It is twice as frequent in the male as in the female. The prime factor in its causation is an organ inferiority, with trauma and infections as contributory causes.

Symptoms—These are both subjective and objective, and depend upon the amount and region of the cord involved. At first they are segmental in type, but as the invasion extends or remains stationary, so also may the symptoms change. They may be one thing today and entirely different in a few weeks or months, either more marked or perhaps less when the patient has a slight remission with, a so-called, improvement.

#### *Subjective Symptoms*

These are: A slight paresis, then flaccid paralysis of the muscles of the area supplied by the segment, stiffness and uncertainty in gait, coldness of the extremities, changes in speech, difficulty in swallowing, cyanosis, bladder symptoms and an inability to feel heat, cold and pain, with resulting burns, freezing and often injury of the fingers and toes. Sometimes this loss of sensibility to these sensations are the first symptoms noticed.

#### *Objective Symptoms*

Eye: Rarely we see an Argyll-Robinson pupil, Enophthalmus with partial closing of the lids is present in cases in which the cervical sympathetic is affected.

Spinal Curvatures: In over fifty per cent these are present and are due to compensatory postures, strains and pulls on the part of the patient to equalize power and give rest and comfort.

#### *Motor Symptoms*

Those of the lower motor neurone types are the first to appear. Atrophy of the

muscles supplied by the anterior horn cells, diminished, then loss of reflexes with electrical changes and fibrillary tremors in these muscles, bony changes in the parts affected with contractures. As the invasion spreads and involves the lateral cerebro-spinal tracts there is produced a spastic hemiplegia or paraplegia below the lesion, with increased reflexes, ankle clonus, Babinski, Gordon, Chaddock and Oppenheim's big toe extension phenomena.

#### *Vasomotor Symptoms*

Such as swelling, oedema, anaemia and secretory disturbances are also seen.

#### *Sensory Disturbances*

These are the most important and are usually pathognomonic. The loss of the epicritic sense and deep sensibility is very late or not at all, whereas the loss of sensation to pain, heat and cold is very common and early. This retention of ordinary tactile sense with loss of the protopathic sense producing analgesia and thermoanesthesia are almost invariable present and result in the so-called dissociation symptoms. This is caused by an interruption of the second sensory neurones for pain, heat and cold in their passage through the posterior spinal grey column or anterior white commissure of the spinal cord. By studying the pathology of these cases it becomes apparent that these neurones are early interfered with, either their cell bodies or their axons as they cross over to join the opposite posterior spinothalamic tracts are caught.

Bearing in mind that different sensations are carried by different tracts in the cord; that some are relayed in the posterior grey columns while others are not; and the position of the usual primary lesion in this disease and we are able to definitely understand, appreciate and apply the knowledge gained from the study of this condition.

In explaining this dissociation anaesthesia, we must first take up sensation in all its forms and carry it through the cord.

#### *Somatic Sensation*

Must be classified according to the special end organ receiving the sensation. From the position of these organs and the nerve fibers carrying the impulses, we speak of the following types of sensation.

1.—Epicritic sense, conveyed by cutaneous nerves and subdivided into:

(a) Simple touch as recognized by feeling cotton.

(b) Slight degrees of heat and cold



ranging from 104 degrees F. for heat to 72 degrees F. for cold.

(c) Tactile discrimination or compass sense.

2—Protopathic sense, carried by nerves which lie deeper and is subdivided into:

(a) Pain.

(b) Heat, above 120 degrees F.

(c) Cold, below 60 degrees F.

3—Deep sensation: Carried by nerve fibers running deeply in the same bundles as the motor nerves and is subdivided into:

(a) Muscle, tendon, joint and stereognostic sense.

(b) Tuning fork or bone sense.

While all forms of epicritic, protopathic and deep sensation travel together in the sensory nerves through the posterior spinal root ganglia and posterior spinal root to the cord; there is then at once a complete rearrangement of the paths by which different forms of sensations travel up to the brain.

Fibers of the posterior nerve roots which convey deep sensation, travel up the funiculi gracilis and cuneatus of the same side, to end after decussation in the medulla in the nuclei gracilis and cuneatus of the opposite side.

Fibers of the posterior nerve roots carrying sensation of pain, heat and cold which enter the cord at and above the twelfth thoracic segment travel upward for from two to six centimeters in the postero-lateral columns and end by synapsing around cells in the posterior grey columns, probably in the gelatinous substances, of the same side. Here they are taken up by secondary neurones which immediately cross by way of the anterior white commissures to the opposite posterior spinothalamic tract.

Fibers of the posterior nerve roots which convey simple tactile sensation after entering the cord and traveling up from two to six centimeters on the same side, partly end by synapsing with cells of the posterior grey columns where secondary neurones convey this sensation across to the opposite side of the cord, by way of the anterior white commissure to the opposite anterior spinothalamic tract. The rest of the fibers conveying simple tactile sensation enter the posterior funiculi of the same side and after decussating in the medulla end in the opposite nuclei gracilis and cuneatus.

Note carefully the following points:

(a) Deep sensation is homolateral until it reaches the medulla.

(b) Protopathic sensation (pain, heat

and cold) becomes heterolateral almost immediately after entering the cord.

(c) Simple tactile sense is both heterolateral and homolateral. Resulting analgesia and thermoanaesthesia is due to the fact that the posterior-spinothalamic tract is purely heterolateral.

From this dissociation the pioneers in neurology were led to believe that there existed in the cord a very definite area which when interfered with, resulted in loss of sensation to pain, heat and cold. Later on from the study of cases of syringomyelia, by the proper staining methods, these tracts were definitely located and shown to consist of a small compact bundle of nerve fibers traveling upward, almost on the surface of the cord. Its posterior limits are two and a half millimeters from the anterior surface of the posterior spinal roots, extending two and a half millimeters anteriorly from this point and to have a depth of two and a half millimeters from the surface of the cord. In the University of Pennsylvania Medical Bulletins of July and August 1905, Spiller reported a case in which the posterior spinothalamic tracts on each side of cord were cut across by two separate small tubercular foci and that the only effect produced on the patient was the loss of pain, heat and cold below the lesions with absolutely no other changes.

From the analgesia and thermoanaesthesia seen in these cases, the pathway to cordotomy was blazed and Spiller and Frazier of Philadelphia have reported the successful performances of posterior spinothalamotomy in some twenty-odd cases for relief of pain in inoperable cases of pelvic conditions, and I had the pleasure of patients following the above mentioned operation. The first case of cordotomy was reported in the Journal of the American Medical Association of June 1912.

Every one of you have seen cases whose suffering was intense, who could not be relieved by the opiates or any other means at our command, and were allowed to live and linger for months, even years with no relief whatever; and it is in these cases that something should be done and cordotomy seems to be the only means to accomplish this end.

#### Summary

(a) In syringomyelia there is a loss of sensation to heat, cold and pain below the lesion with sometimes no other attendant symptoms at first.

(b) This positively proves that these sen-

sations are carried by a distinct tract in the cord.

- (c) As a result of a thorough study of the pathology of these cases, this tract has been shown to be heterolateral, situated on the surface of the cord, to be two and a half millimeters in depth, two and a half millimeters in width and to extend two and a half millimeters anteriorly from a point two and a half millimeters anterior to the posterior spinal roots.
- (d) That this point is easy of access by way of a laminectomy.
- (e) That by severing this tract no sensation to pain, heat or cold can be felt in any area supplied by the cord below the incision with absolutely no other impairment of function.
- (f) That this operation offers to the surgeon a method of giving patients relief from uncontrollable pain in operable conditions of the pelvis.
- (g) These conclusions are based upon anatomical and physiological facts, not theories.

#### *Report of Case*

S. W. T.—White male, age 40, married, butcher by trade.

Complaint: Pain and soreness in back and hip with slight stiffness of legs. At times has frequently stood before the fire until legs were completely blistered, yet there was no feeling of pain or heat. Has feeling of fullness and soreness in abdomen. Began about one year ago, has progressively grown worse. Appetite good, bowels constipated.

Family History: Unimportant.

Social History: Married, wife living and in good health. No children.

Previous diseases: Usual diseases of childhood. Influenza 1918, typhoid 1920, small pox 1921, dengue 1922, frequent colds and tonsilitis for past three years. Denies venereal diseases. When attempting to lift heavy objects for a period of about four years has frequently suffered with severe pain in back. Thrown from horse about six years ago with no apparent injury.

Physical Examination: Fairly well nourished, papular eruption over arms, shoulders and chest. Teeth show some caries, gums quite spongy with some recession. Liver enlarged two and a half centimeters in mid clavicular line. Heart normal in size and position no murmurs, pulse rate 80 per minute, good volume, blood pressure, systolic 125, diastolic 86. Genito-urinary negative.

#### *Neurological*

Pupils: Equal, regular outlines, react to light and accommodation. Consensual reflex present both sides. Ciliospinal reflex present both sides.

Fundi: Normal.

Cranial nerves: All intact.

Co-ordination: In upper extremities normal, marked inco-ordination in lower extremities.

Station: Slight Romberg.

Speech: Normal.

Writing: Normal.

Gait: Spastic in type.

Deep reflexes: Normal in upper extremities, markedly increased in both lower extremities, with Babinski, Gordon, Oppenheim, Chaddock and a slight ankle clonus on right side.

Superficial reflexes: All present and normal.

Tropic changes: Slight atrophy of gluteal and peroneal group of muscles in right lower extremities.

Vasomotor signs: Coldness with slight cyanosis of right foot.

Sensation: Normal throughout the body except in both lower extremities where there is a complete loss of sensation to pain, heat and cold from a point just below the groin anteriorly and the mid gluteal region posterior, with retention of tactile, muscle and bone sensation.

X-ray of vertebrae and sacrum show no bony changes. Blood picture, normal, blood Wassermann, negative. Spinal fluid; pressure 10 m. m. of mercury, cell count 9, globulin, not increased. Sugar, not increased. Wassermann, negative. Colloidal gold curve, negative.

Diagnosis: Syringomyelia of lumbar enlargement.

#### DISCUSSION

Dr. W. J. Otis (New Orleans): The pathology of this disease has already been presented to you. Not since 1564 when Etienne described cavity formation in the spinal cord, which later in 1668 and in 1740 was mentioned by Bournet and Morgagni and by Portal in 1800 to the time when Ollivier in 1834 named the disease entity through the period until 1882 when Kahler and Schultze described the factors that permitted a diagnosis during life, is surgery mentioned as a factor.

Recently at the University of Pennsylvania Spiller and Frazier, aided by some others, have performed cordotomy on several cases with gratifying results. The same has been attempted in New York. It is interesting to observe the boldness of the doctor in presenting this subject before this society. Had he done so some years ago, he would have been tried for medical heresy. He is to be complimented nevertheless for bringing this before this body. There is no reason why operations such as these cannot be performed here as well as in other localities.

Dr. E. McC. Connelly (New Orleans): Doctor Young has afforded us considerable food for thought. Certainly cordotomy, or resection of the pain tracts, is a very desirable thing in many cases. I should think the application would be somewhat limited, for as you know, the cystic formation extends even into the Medulla, and in cases of that sort it would be obviously impractical. Presupposing the utmost technical skill on the part of the surgeon, with an absolute knowledge of his field, I think it would be comparable to the operation of laminectomy for drainage of the cyst although its application is more limited than drainage of the cyst would be as we are unable to operate above a certain level. However, I agree with Doctor Otis that Doctor Young deserves considerable credit for having brought this to our attention. It has been done by Spiller and Frazier and surely is worthy of investigation, for there is absolutely nothing else that I know of that would relieve the intense pain and agony of not only syringomyelia, but of spinal cord tumors and other conditions.

Dr A. A. Herold (Shreveport): The subject of syringomyelia is of importance from more stand-points than one, but more particularly from a diagnostic standpoint. Doctor Young will probably recall the case he saw in consultation with me, a man who had been diagnosed as having a tabes dorsalis and had received some anti-luetic treatment, but was growing progressively worse. Blood Wassermann negative, cerebrospinal fluid negative for Wassermann and everything. The history was negative of any initial sore or any other symptoms of syphilis. After testing him out Doctor Young came to the conclusion that it was a case of syringomyelia. I have understood since that this man has had other tests; as a result of which he has received anti-syphilitic treatment without improvement.

The surgical suggestion of Doctor Young is interesting. Two years ago Frazier reported a number of cases and made a plea that from a humanitarian standpoint this was much better than filling these patients full of drugs. Malignancy in the lower part of the body can be completely relieved of pain and these people made comfortable the rest of their lives by a simple surgical procedure.

Dr. L. L. Cazenavette (New Orleans): This subject is certainly very interesting to the neurologist. I have not met with many cases of syringomyelia, but there are certain points in the symptomatology of the disease which might be pointed out—the presence of pain in the portion of the body and limb, which corresponds to affected segment of the cord. There is also in many such cases a certain amount of progressive muscular atrophy, and also sensory dissociation, where the sense of touch is present but that of heat and cold is lost in the same area. This point should be particularly remembered. The disease has often been looked upon as the result of a congenital defect in the development of the cord, sometimes aggravated by an injury. It has also been looked upon as an incurable disease. Cordotomy, as described by Doctor Young, may be only a palliative measure. These patients suffer a great deal, and if such a procedure will relieve them it may be attempted.

One word in regard to the possibility of making wrong diagnosis in these cases. We have other very serious diseases in which the nervous system is affected which may be difficult to differentiate

from syringomyelia. I refer to cases of leprosy. Many years ago, there were in New Orleans at the Charity Hospital cases diagnosed as cases of syringomyelia. These cases after more careful examination proved to be cases of leprosy.

They were among the first group of lepers to be sent to the Leper's Home.

Dr. C. V. Unsworth (New Orleans): Doctor Young's paper is very interesting—especially his method of examination. You can well see that he has been in the University of Pennsylvania. I have had the good fortune to be there myself for a short course. It is his method of examination which prevents him from slipping up in his diagnosis. There is no reason why a man should make a mistake in diagnosis of tabes if he makes a thorough neurological examination, and I do not know of any branch of medicine that requires a more thorough examination, and with this thorough examination it is almost impossible to make a mistake.

So far as the cordotomy is concerned, it is absolutely new to me, but it appeals to me as a measure of relief for these people that at the present time we are unable to do anything for. I want to congratulate Doctor Young.

Dr. John D. Young (closing): In closing, I want to thank the gentlemen for their discussion. The question of cordotomy is to be considered in neuro-surgery for what it may offer in other conditions—inoperable conditions of the pelvis and uterus, rectum, etc., those patients on which a colostomy has been done and perhaps they have gone on for two or three or four years with no relief—these are the patients in which a cordotomy certainly means relief. That is the main thing. It is a question of using this method of Frazier and Spiller for relief of inoperable conditions in the pelvis and lower down.

I want to thank Doctor Unsworth for what he said, but I am a graduate of the University of Texas and have never been at the University of Pennsylvania.

I thank Doctor Cazenavette, and I want to say that leprosy in its early stages is always peripheral, whereas syringomyelia is central in its beginning. Leprosy later on may involve the nervous system, but in the early stages it is not central.

## New Orleans Medical and Surgical Journal

*Established 1844*

Published by the Louisiana State Medical Society under the jurisdiction of the following-named Journal Committee.

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**SUBSCRIPTION TERMS:** \$2.00 per year in advance, postage paid, for the United States; \$2.50 per year for all foreign countries belonging to the Postal Union.

*Material for publication should be received not later than the twentieth of the month preceding publication. Orders for reprints must be sent in duplicate when returning galley proof.*

*The JOURNAL does not hold itself responsible for statements made by any contributor.*

*Communications should be addressed to: New Orleans Medical and Surgical Journal, 1551 Canal Street, New Orleans, La.*

### LOUISIANA STATE MEDICAL SOCIETY

The Louisiana State Medical Society has just completed a most successful year. During the year 1924 they have enrolled 1,209 physicians of Louisiana as active members, which enrollment represents the highest numerical strength ever attained by our society. The past year has been replete with every evidence of unusual activity in medical meetings and organization work. Our district medical societies have held numerous meetings, and have had presented to them many high-class scientific contributions, not only by their local profession but from guests invited from other parts of the state. The year has seen the organization of three parishes, Livingston, LaSalle and Richland.

The above is merely recited as an indication for the belief that in medical affairs our state is fast becoming very much interested in the various subjects and allied works in connection with organized medicine. It used to be a hard matter to get a quorum for these various district or parish society meetings. It is now a common

sight to see forty or sixty members attending such gatherings. However, with all this progress we have not yet reached the ideal, and such encouragement as we have received from the year just past, acts as a stimulus for our activities in the future. We are bound to accomplish more in 1925 and future years than we have at present. We cannot stand idly by and see other state medical societies attempting new things for the benefit of physicians and the public. Sooner or later we should take some definite stand in regard to periodic health examinations for the citizens of Louisiana.

The Louisiana State Medical Society should view with favor any opportunity to enlighten properly the citizens of our state upon all medical subjects, placing the matters before them in such a way that there will be no doubt in their minds as to the course they should pursue. We have to take the public into our confidence in regard to these matters, and in some way reflect the attempts, made by other large medical organizations, in carrying to their very doors through medical publications and other means of assimilation, in a plain understandable form, just exactly what the medical profession of our state stands for. We have not yet developed our usefulness as we should. The time should come when our medical profession should be responsible and made the custodian of all matters relative to medical subjects, whether personal or public.

We, therefore, have a lot to look forward to, and it is our earnest desire that during 1925 we may be able to make some steps in the direction of this progress.

### LOOKING BACKWARD IN LOUISIANA'S MORBIDITY STATISTICS

Sometimes it is wise to pause, to look backward, to consider what has been accomplished in the light of expended effort. Our vital statistics represent a species of recapitulation, a record of the past. Frequently, they do not flatter our efforts—on the contrary they often point to dereliction in more ways than one.

Morbidity statistics are notoriously incomplete. Doctors do not report all cases of infectious diseases which come to their notice. We will not discuss the reason why; they know well enough themselves. The fact that they are especially delinquent in the reporting of certain diseases notably malaria, tuberculosis and the venereal infections, needs no mention; it is too

well known. Five years is not a very long period of time even in health work, but it is sufficiently so to make the figures worthy of consideration. This is true even of our defective morbidity statistics.

The results for 1924 are not entirely complete; there will be additions necessary when mortality and morbidity figures are checked with one another. For the other four years, inclusive of 1920, they are as complete as it is possible to obtain them. The discrepancy of 1924 does not vitiate the deductions for the half decade.

We are not astonished to find that for the five-year period—1920-1924—influenza is the only infection superseding in point of numbers the venereal diseases, and they are close enough together. There were nearly 42,000 cases of the highly contagious respiratory infection as compared to about 40,500 of the very much less easily acquired venereal infections. Doesn't this make you stop and think, doctor? Don't forget either that these statistics represent only part of number that actually occurred; how large a part we do not know, but probably both figures could be safely multiplied by three or five, or possibly a larger factor.

Next to venereal diseases comes measles with less than one-third as many cases, viz: 12,500 approximately, which we have reason to believe is pretty nearly the truth. But will anyone believe that during the five years there were only 12,000 cases of tuberculosis, roughly 8,500 pneumonias or 8,000 cases of malaria? Hardly.

Smallpox data are probably complete for obvious reasons, but the fact that there were a trifle over 4,800 instances of smallpox within the confines of the state of Louisiana during 1920-1924 is no cause for congratulation. On the contrary, the very existence of this eminently preventable disease at all implies conditions existent, which reflect nothing less than discredit.

Typhoid is still in existence. There have been 4,818 cases reported so far during the five-year period. This number is not excessive, but it might well be improved upon and doubtless will in the future.

Scarlet fever and diphtheria are two acute, infectious diseases, the reports for which are doubtless as reliable as those for smallpox or measles. There were approximately 4,600 diphtheria cases reported, and only 1,767 cases of scarlet fever have been recorded so far.

Whooping cough, too, is well reported as

a rule; 2,755 cases cannot be considered excessive for this disease during five years.

This account touches in point of numbers only the more important of the reportable diseases. There are others, of course, but with relatively few cases. The main interest in this exposition of disease prevalence lies in the fact that of nearly 142,000 cases of the principal infectious diseases, the venereal infections yield the first place to influenza alone. They represent about 35 per cent of those cases which we have been considering, even bearing in mind that the reports are defective. Venereal diseases show a decided trend upward and we would respectfully suggest, it is time something be done.

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M. S. M. A.

President H. M. Folkes, of the Harrison-Stone County Medical Society advises the *Journal* that the Mississippi State Medical Association will convene in Biloxi, Mississippi, on Tuesday, May 12th, with headquarters at the Avezel Hotel where ample space is available for any and all exhibitors who desire same. In order to avoid unnecessary correspondence the *Journal* has been requested to advise all parties interested to address the Avezel Hotel for any information desired.

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#### CORRESPONDENCE

New Orleans, La., Jan. 31, 1925.

To the Editor:

The Woman's Maternity Relief League is an organization, the purposes of which are so frank and its position so fair, in regard to certain principles which it holds, that its members wish no misunderstanding of their attitude to exist in the minds of any members of the medical profession.

Our attitude in regard to the matter of anesthesia in childbirth is entirely in keeping with that of the leaders in obstetrical procedure today, and we offer no apologies for our position. We are unalterably convinced that any physician who fails to relieve in every possible way the intense suffering of childbirth is guilty of an act of great injustice against the woman placed in his care.

The argument that may have been true some years ago, that women must suffer unrelieved at that time because means for relief were lacking, cannot be honestly or truthfully used today, since a number of methods have received the endorsement of

medical science and a choice may be made by that physician who really desires to relieve the suffering of his patient. It is ignorance of the wonderful steps made by medical science in the past twenty-five years, and particularly the developments in the field of anesthesia, that forces women to accept such evasions from certain physicians who far too many times cloak an indifference to this suffering under puzzling and misleading medical phrases, and so hold the uninformed patient in submission to their dictates.

It is to avoid such consequences to women in childbirth that the Maternity League has been studying and investigating the various methods of obstetrical anesthesia in use today among those physicians who believe in applying their skill for the benefit of the woman in labor as they do in other circumstances of professional relation to the patient.

We have sought to bring before the women of New Orleans the true facts in regard to the merciful method in the use of scopolamine-morphine called Twilight Sleep, and correct in their minds the errors which have gone abroad concerning it, viz, the reports which were based on the early experiments in the hands of many physicians, not all of whom were scientifically capable of pronouncing on its virtues or shortcomings. The developed technique of today makes it a very different method from that early unperfected one, and the thousands of successful cases reported by physicians who are using it with ever increasing confidence gives us great pleasure and gratification.

Because of our active work in this respect we have become aware of the fact that some physicians are under the impression that the League is urging the scopolamine-morphine method to the exclusion of all others, and also that they are influencing women to ask for the administration of that method from whatever physician they may be in the habit of employing.

This is so fundamentally an error that we wish to correct it in the mind of anyone

who may have misunderstood our real purpose. We habitually and punctiliously refer all inquiries to those few physicians who have perfected themselves in the technique of the method. Last month one lady, a wealthy and intelligent woman from another state, one lady from New Orleans and another from a town in Louisiana, were all directed to these physicians, while one patient from Beaumont, Texas, placed herself in the care of one of them, through the influence of the Maternity League work.

Our position is the broad one of an insistence upon the relief of the suffering of childbirth as far as is compatible with safety, and we are finding that contrary to old conceptions, this is much farther than we had dared hope. We are studying the reports of all such methods as are being tested by medical scientists and are enthusiastically endorsing such as are pronounced by those scientists as safe. We are arranging a series of lectures by some of these physicians who are keeping abreast of the latest developments in obstetrical anesthesia, and hope to have explained to us the nitrous oxide oxygen, ethylene gas, the new rectal method, and Gwathmay's synergistic method.

Our minds are entirely open to the merits of these various measures, and we honor the men who are seeking to establish them. But we resent deeply the astonishing and unquestionable indifference to the agony of childbirth found so frequently in physicians otherwise humane in their attitude toward human suffering.

We feel, however, in view of all that we are learning, that the day is not far distant when to allow a woman to suffer the anguish of childbirth unrelieved, will be discountenanced by all reputable physicians.

Hoping that this statement of our position will remove any misunderstanding of our attitude, we beg to remain, very truly yours,

MRS. JNO. F. OECHSNER, Pres.  
MRS. BENJ. ORY, Secretary.

# PROCEEDINGS OF THE ORLEANS PARISH MEDICAL SOCIETY

## REPORT OF THE ANNUAL MEETING ORLEANS PARISH MEDICAL SOCIETY, JANUARY 12, 1925

The Annual Meeting of the Orleans Parish Medical Society was called to order by the President, Dr. Chaille Jamison, with Dr. Lucien LeDoux, secretary at desk.

The reading of the minutes of the fourth quarter were dispensed with upon motion of Dr. E. A. Ficklen, seconded by Dr. D. N. Silverman, and carried.

The annual report of the secretary, Dr. Lucien LeDoux, was read, and, on motion of Dr. Ficklen, seconded by Dr. McIlhenney, the report accepted and referred to the proper committee.

The annual report of the treasurer, Dr. John A. Lanford, was read. It was moved by Dr. W. Block, seconded by Dr. W. Reed, that this report be accepted and referred to the proper committee.

The annual report of the librarian, Dr. Daniel N. Silverman, was read. It was moved by Dr. J. Dupuy, seconded by Dr. D. Parham, that this report be accepted and referred to the proper committee.

The annual report of the scientific essays committee, judiciary, state medicine and legislation, condolence and publication committees were read and accepted. The annual report of the hospital abuse committee, Dr. P. A. McIlhenney, chairman, was read and referred to the board of directors. This completed the reading of the reports as required by the by-laws.

Dr. Chaille Jamison, retiring president, then made his final report to the society at the conclusion of which it was moved and seconded that the report be accepted and referred to the proper committee.

Dr. Jamison then introduced the Annual Orator, Dr. Erasmus D. Fenner. His address forms part of this report, and was well received, and greatly applauded. At the conclusion of the annual orator's address the retiring president, in a few well-chosen words, presented a bouquet to Mrs. Urban Maes on the part of the society.

Dr. Jamison then turned the gavel over to the new president, Dr. Urban Maes.

The first act of the new president was to invite Dr. Ernest S. Lewis to share the rostrum with him. This mark of respect was accorded much applause. Dr. Maes then read his inaugural address, which was very favorable received.

## *New Business*

It was moved by Dr. Jamison, seconded by Dr. Seemann, that a vote of thanks be given to Dr. Homer Dupuy and his committee for the excellent manner in which the Southern Medical Convention was carried on, and for the splendid work in raising funds to entertain them.

Installation of the following officers:

Dr. Maurice J. Gelpi, first vice-president.

Dr. L. L. Cazenavette, second vice-president.

Dr. Jerome E. Landry, third vice-president.

Dr. Lucien LeDoux, secretary.

Dr. John A. Lanford, treasurer.

Dr. Daniel N. Silverman, librarian.

All of the new officers said a few words in appreciation of their election.

The president then announced that the meeting would adjourn and refreshments would be served in the Green Room.

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## ADDRESS OF ANNUAL ORATOR DR. ERASMUS D. FENNER

Mr. President, Ladies and Gentlemen:

To address the Annual Meeting of the Orleans Parish Medical Society must be considered both a privilege and an honor, and it is because I have so fully appreciated the distinction conferred upon me by the invitation to appear before this audience in the role of annual orator that I have found courage to attempt something for which I have so little aptitude or experience.

In the present state of medical organization in the United States, when the powerful American Medical Association has affiliated with it first the state medical associations, and then the subsidiary county or parish societies; when the membership in the national organization is dependent upon membership in the state society; and this, in turn, requires that a man have been accepted by his local society, it is hard to realize how different a task our fathers found it to launch and maintain a state society is a part of the annals of the past, but fortunately at every such crisis there were always men to be found who were determined that the local profession should have some means of getting together, exchanging experiences, imparting their knowledge one to another, and maintaining some organization which would have a certain amount of authority to address the

public, and to carry on the work of education of the people which has always formed so important a part of the work of the medical profession.

I suspect that the greatest part of this audience, both lay and professional, is under the impression that not only the Orleans Parish Medical Society, but the Louisiana State Medical Society are of a far greater antiquity than is the actual fact. The truth is that both these associations were organized at about the same time; the State Society on January 15, 1878, the Orleans Parish Medical Society on May 6th of the same year. Neither is, therefore, hoary with age.

In an address delivered by Dr. Stanford E. Chaille before the Louisiana State Medical Society in 1879, he called attention to the fact the successful movement on January 15th, 1878, was the second attempt in Louisiana to maintain a state society. Dr. Chaille tells us that on November 10th, 1846 there was organized at New Iberia, La., the Attakapas Medical Society, which on May 9th, 1848, summoned the physicians of the state to meet in convention in New Orleans in March, 1849. In response, the Physico-Medical Society of New Orleans resolved, on January 6, 1849, to aid the Attakapas Medical Society in organizing a State Medical Society. Some physicians did meet in New Orleans on March 20, 1849, but adjourned to December 2nd, and finally on December 4th, succeeded in organizing the Louisiana State Medical Society. Wide powers were committed by the constitution to a board of administrators, and a special clause admitted to membership, not only physicians, but "all duly licensed apothecaries and druggists." At the first meeting there were five parishes represented, and 48 members were present of whom 44 were from the Parish of Orleans. In spite of the preponderance of city men, perhaps in recognition of the fact that the initiative in organization came from the country, and perhaps also in the hope of encouraging a better attendance from the country at future meetings, the presidency was given to Dr. Hale, of Alexandria. This hope, however, proved futile. Distance and bad roads made it too difficult for the men from the country to attend the meetings. After the first, there was never a larger attendance than 42, and practically all of these were from New Orleans. No state association could survive such a condition of affairs, and in 1855, its fifth year, the society quietly

expired as a result of the apathy of the country members. Meanwhile, the anti-slavery issue was occupying the minds of all the people; then four years of war suspended every sort of organized action, and the terrible period of reconstruction which followed the surrender of General Lee before Richmond laid the blighting hand upon this as upon every other sort of activity in Louisiana.

With the heroic protest of September 14th, 1874, and the final induction of Governor Francis T. Nicholls into the State House at Baton Rouge, in 1877, there dawned a new day for Louisiana. Self government was restored to our people with the withdrawal of federal military support, and it was probably the fructifying influence of this new sunshine in their hearts that led to the almost simultaneous organization of a State Medical Society and the Orleans Parish Medical Society. Just as was the case in 1849, the movement to form a State Medical Society was inaugurated by the country. On May 22, 1876, the Plaquemines Parish Medical Association had invited their professional brethren of Louisiana to unite with them in organizing a State Medical Association. On May 14, 1877, the Shreveport Medical Society took similar action; and on November 5, 1877, the first named society renewed its invitation, urging that a convention be held in New Orleans on January 14, 1878. The profession in New Orleans had long been anxious to promote the action in view, and they united in issuing a circular letter urging the physicians of the state to meet in convention. These efforts met with success, and upon organization it was found that 15 out of 58 parishes were represented, and of the 939 physicians and surgeons reported by the United States census to have been in Louisiana in 1870, 80 had become members. Of these 46 were from Orleans; 34 from the 14 country parishes. From this feeble beginning the growth and development of the State Society has been progressive until today. It numbers 1,206 out of a total registration before the State Board of Medical Examiners of about 1,850.

The growth of the parish society has been just as encouraging. Starting with a membership of 46, there are today enrolled upon its membership 458 of the 580 licensed practitioners of New Orleans.

The city of New Orleans was not without a medical society at the time the Orleans Parish Society was founded. In 1873



the New Orleans Medical and Surgical Association was formed, and was still in existence in 1878, but evidently its activities were not very great, and there existed a considerable amount of discontent among the younger and more vigorous men in the city. The New Orleans Medical and Surgical Journal for 1878 contains the following notices: "A meeting of medical gentlemen was held on April 22, 1878, to establish a Parish Medical Society in affiliation with the State Medical Society. The meeting was well attended. The only action taken was the appointment by the temporary chairman, Dr. Logan, of a committee on permanent organization, viz: Drs. Charles Turpin and Herrick. This committee will report on Monday, May 6, when it is hoped the objects of this meeting will be successfully accomplished." "On May 6th, the Orleans Parish Medical Society was organized, and affiliated with the state society. The president was Dr. Turpin; the vice-presidents, Drs. S. S. Herrick, Ernest Lewis and J. P. Davidson; the recording secretary, Dr. A. B. Miles; the corresponding secretary, Dr. David Jamison." Of this first group of officers all have passed to the Great Beyond with the exception of Dr. Ernest Lewis, who is still an active member of the society, the Nestor in our ranks, universally respected and beloved, and in spite of his eighty-five years, a magnificent example of mental and physical vigor. I hope I may be permitted to digress for just a moment to pay a slight tribute to this splendid example of the highest type of Southern gentleman and surgeon. A good many here will recall the outpouring of the profession last year to do him honor on what we called Dr. Lewis's night. This meeting hall, wherein he had delivered so many lectures to his students in times past, was crowded with his conferees, young and old, their faces beaming with affection and goodwill, their hearts full of pride for his achievements and of thankfulness that he was able to receive this well merited ovation with his carriage still erect, his step elastic and springy, his fine eyes flashing and with his mind as alert and accurate as in days gone by. And who that were present on this memorable occasion will ever forget the modest, unaffected story of his career as it fell from his lips that night. Chief Surgeon to the famous General Forrest, when hardly more than a boy; house surgeon of the Charity Hospital during the military occupation of General Butler, and haled before the Silver-

spoon general because he refused to eject Confederate soldiers to make room for Butler's men, meeting the threat of imprisonment, or even worse, with the same fearless intrepidity with which he has faced every crisis in life; and because of the unassailable justice of his demands, returning from his arrest with authority from the general to give the same succor to sick and wounded "rebels" as to the men in blue; his subsequent career has been worthy of this earlier period. The great field of gynecology was just beginning to be developed, and to this branch Dr. Lewis devoted himself. Always an omniverous reader, and possessed of a retentive memory and a keenly analytical mind, he devoured everything that was written by others, sifted the chaff from the wheat, and then tested it in the crucible of his own experience. Unfortunately, Dr. Lewis was not in those days a writer. The care of his family, the obligations of his growing practice, the enthusiasm with which he devoted himself to the development of his specialty in the wards of the Charity Hospital left him little time to publish his work.

And so the enormous experience he had gained in every form of major operative gynecology, and the soundness of the conclusions he had drawn from his reading and his own observations remained comparatively unknown, except to those who had come into personal contact with him as a teacher. Never shall I forget the amazement of Joseph Price, of Philadelphia; of Howard Kelly, of Baltimore, and of others who attended the first meeting of the Southern Gynecological and Surgical Society held in New Orleans—men who were constantly attending medical meetings, and who had published the statistics of long series of cases—when they discovered here in New Orleans, little known except to his former pupils, a man whose unpublished work was even greater, whose methods were as up-to-date, and whose results were fit to bear comparison with those of any man in America. It is, indeed, a pity that Dr. Lewis wrote so little, but it is none the less a wonderful thing to realize that without contact with other leaders in his specialty, except through their writings, he should have been able to assimilate every advance and to perfect himself in every procedure, so that he was able, without hesitation or fear of comparisons, to submit his work to the critical eyes of the leaders from any section of the country.

Dr. Lewis is the prototype of the men

who organized the Orleans Parish Medical Society — vigorous, progressive, determined. But if the overthrow of carpetbag misrule in Louisiana had opened before their eyes a vista of success and prosperity, the terrible summer of 1878 bid fair to extinguish their hopes, and destroy the newly formed medical society. What words can adequately express the fearful significance in those days of the announcement in the bulletin of the United States Marine Hospital Service, on July 12th, 1878, that "Cases of Yellow Fever have begun to appear in New Orleans." Even a whisper of the approach of Yellow Jack was enough at that time to blanch the lips of the boldest and to awaken fearful memories of past visitations when thousands were swept away by the disease. In 1878 the spread of the disease was rapid, the number of cases enormous, and the mortality appalling. In Memphis the number of deaths was over 5,000; in New Orleans, out of a total mortality of 8,289, Yellow Fever claimed 4,022. Altogether there were 22,247 cases in the city, of which one out of five was fatal. The mode of propagation of the disease, and consequently the methods by which it might be prevented, were still a mystery. The accepted notions on this may be gleaned from the bulletin issued on August 15th, 1878, by the then surgeon-general of the U. S. M. H. S. to his officers, which stated: "In view of the existence of Yellow Fever in several cities of the United States, it seems desirable that the surgeon-general should make known his individual views in reference to the disease and its prevention. The weight of scientific evidence seems to warrant the conclusion that Yellow Fever is produced by an invisible poison, capable of self multiplication outside of the human organism, *which it enters through the air passages.*" Such continued to be the doctrine for a good many years, and fumigation of house, clothing and of mail pouches continued to be the practice even during the moderate outbreak in New Orleans in 1898.

The possible connection between the mosquito and Yellow Fever has not entirely escaped the minds of our predecessors. In 1794, Dr. Drysdale, of Baltimore, writing to Dr. Benjamin Rush, of Philadelphia, said: Locusts were not more numerous in the reign of Pharaoh than mosquitoes through the last few months; yet these insects were very rare only a few years past when a far greater portion of Baltimore was a marsh." Rush himself, in 1797, and

again in 1805, when there were epidemics of Yellow Fever in Philadelphia, noted that "flies and mosquitoes were infinitely multiplied," and that "mosquitoes abounded, as usual in sickly seasons." Dr. John Vaughan, of Wilmington, Delaware, called attention to the fact that in 1802, the year of an epidemic, from July until frost the lower parts of the town were infested with myriads of mosquitoes. Finally, in a remarkable paper published in the New Orleans Medical and Surgical Journal in 1848, Dr. Nott, of Mobile, charged that the mosquito or some similar insect fulfilled the requirements as a possible conveyer of Yellow Fever. Greensville Dowell, of Galveston, in 1876, also called attention to the fact that the mosquito is governed by the same natural laws as Yellow Fever. In 1881, Dr. Charles Finlay, of Havana, convinced himself by careful observations that the mosquito was the agent through which the disease was spread, and that provided no mosquitoes were allowed to bite them, contact with the sick, however close, was without danger. These early gropings towards the truth of Drysdale, Rush, Vaughan and Nott were not thought worthy of attention, and even the positive declaration of Finlay, in 1881, was rejected for many years by nearly everyone. His superiors laughed at Finlay's claims, and facilities for further investigation were denied him on the ground that it was a waste of time and money. The seed planted by Finlay, however, was bound to bear fruit. In 1900, a commission which was composed of Drs. Carroll, Reed, Lazear, and Agramonte, was appointed by Surgeon-General Sternberg, of the U. S. Army, to investigate the subject of Yellow Fever. This commission began its work in Cuba in July, 1900, and the result of its work was that we now know exactly how the disease is spread, and what this commission, which have been abundantly confirmed by subsequent investigations, are as follows: 1. Yellow Fever is transmitted by the bite of a special variety of mosquito—the *Stegomyia Faciata*, the ordinary house mosquito—and in no other way, unless by the direct injection of the blood of a Yellow Fever patient. 2. The *Stegomyia* must have bitten a patient during the first three days of his illness. 3. The mosquito is harmless until 12 days after it has bitten the patient. 4. Once infected, the mosquito remains dangerous throughout its life. With its usual conservatism, the medical profession refused to accept these conclusions until they

had been confirmed by further experience. But the work of General Gorgas, in Havana in 1903, of the French commission from the Pasteur Institute in Brazil, of the Marine Hospital forces in Vera Cruz, and, lastly, the conquest of the outbreak of Yellow Fever in New Orleans in 1905, which was fully developed in August, furnished 8,000 cases, and 900 deaths, but was controlled and completely stamped out *before the advent of frost—something that had never been known before*—put an end to doubt and controversy, and established the mosquito theory as one of the triumphs of medical research. As a result of the work of Finlay, of Reed, Carroll and their associates, and the death of Lazear, who gave his life in the effort, the dread spectre of Yellow Fever no longer throws its baleful shadow upon our country. Havana, Santiago, Panama, Vera Cruz and even Rio de Janiero have been "cleaned up," and are no longer a constant source of danger. Even should a case of Yellow Fever slip through our defenses, we now know that the disease can be controlled, that shot gun quarantines need not be feared, a huge mortality can be averted, and an army of refugees need not seek safety by fleeing to other regions. All this is an old story now, ladies and gentlemen, but it is a story of unflagging zeal and intelligent investigation, of courage and self-sacrifice, even unto death in the case of Lazear, which may well demand to be retold from time to time "lest we forget." "The evil that men do lives after them; the good is oft interred with their bones." "One touch of Nature makes the good world kin, that all with one consent praise new-born gods, and give to dust that is a little gils more laud than gilt o'er dusted."

An epidemic of Yellow Fever is a memory now twenty years old with us, and it is but natural that Time should have sifted a little of the dust of forgetfulness upon the shining record of that noble band of doctors, soldiers and civilians who volunteered to sleep alongside of patients whose breath and secretions were still believed to convey the disease, to wrap themselves in clothing and bedding contaminated by the sick, and who finally submitted to be bitten by mosquitoes gorged with the blood of Yellow Fever victims—all in the hope that by so exposing themselves, and mayhap offering the last sacrifice of their very lives to humanity, the mystery of the mode of propagation of Yellow Fever might be solved,

and means of controlling it be given to mankind.

Such has always been the attitude of the medical profession. Not only has it always been able to find in its own ranks men who were eager to confront the direst peril of contagion and death, but it has been able to imbue others with a similar spirit of self sacrifice. Whatever may be the frailties of the individual physician, however numerous may have been our mistaken theories in regard to the mysteries of disease in the past, however skeptical for a time we may be of claims which ultimately are proven to be correct, our profession as a whole is one of the noblest in its aims and aspirations the world has ever seen. And organized medicine, of which the Orleans Parish Medical Society is one of the representatives, is a powerful factor in the accomplishment of our ideals. By encouraging men to report their experiences; by furnishing a tribunal before which their discoveries may be submitted to analysis and correction; by stimulating the spirit of emulation and industry of younger men by contact with the leaders in the profession; the medical society diffuses a greater knowledge amongst us all. And through its public activities it carries forward that education of the public by means of which the people at large are slowly being taught the importance of protecting themselves against infection and disease. Organized medicine is responsible for the banishment of the common drinking cup; for the supervision of the milk and other food supplies of the community; for the dissemination of the knowledge of the dangers of drinking impure water; for a better understanding on the part of the people of the contagiousness of Tuberculosis. Within the past fifty years the medical profession has solved the problem of Yellow Fever; has shown how that other great scourge, Malaria, is transmitted by another variety of mosquito, and how it may be ultimately suppressed; has rescued from the ravages of Hookworm infection countless victims whose pale, muddy skins, retarded growth, lack-lustre eyes and blunted intelligence had remained a riddle and a reproach until the relation between these symptoms and hookworm infection was established. The demonstration that Cholera is spread through rats and other rodents is another of the triumphs of modern medicine, and if time or inclination permitted, I might go on multiplying the evidences of the debt of humanity to the undying enthusiasm of our profession.

But, while we have done so much towards the elucidation of the secrets of disease, and have accomplished a good deal in the education of the public, there yet remains much to do. Our precepts are not always correctly interpreted. Ignorance, unreason and panic fear of a danger which exists only in the excited imaginations of the crowd still manifest themselves from time to time. Anyone who has given the subject an intelligent investigation knows that Tuberculosis is dangerous only when it is allowed to hide in homes, in close and daily contact with other members of the household, with no supervision and with no sanitary provision for the disinfection and destruction of the sputum. With proper precautions, which are easy to apply, the Tubercular are not a menace to their neighbors. And yet in this city, for the past four years, mass meetings, committees of protest, excited threats of incendiarism and violence have been witnessed, all aimed to prevent the erection of a hospital for the segregation and control of the tubercular, who under present conditions, scattered throughout the very neighborhoods where these meetings have been held, whence these committees have been drawn are an infinitely greater source of danger than they would be if gathered together in a well regulated hospital.

A generous and philanthropic woman, Mrs. John Dibert, many of whose deeds of charity are secret to all but herself and the objects of pity, but whose public benefactions are to be seen in her gifts to the building funds of the Hotel Dieu, and the Eye, Ear, Nose and Throat Hospital, some years ago was moved by her pity for the sad plight of the consumptives of our city to donate a large fund for the erection of a refuge for these unfortunates. After nearly five years no site has yet been found upon which this hospital can be erected without arousing a hostility which is astonishing. A little knowledge is a dangerous thing. We have taught the people that tuberculosis is dangerous and contagious, but we have not taught them that this is only true when it is left at large, without supervision and control. The community recognizes that hospitals are one of their most priceless possessions, but almost without exception the people object to have them near them. To overcome this prejudice, and to instill a broader humanitarianism seems to me one of the duties that lies before our medical profession.

#### ADDRESS OF RETIRING PRESIDENT DR. CHAILLE JAMISON

To the Members of the Orleans Parish Medical Society, Ladies and Gentlemen:

It is the purpose of this report to inform you, as briefly as possible, of the work and the accomplishments of the society during the past year. The finances are in a flourishing condition, the total resources of the society being approximately \$35,000.00, which includes a saving of \$1,000.00 from the income of the past year.

About 500 volumes have been added to the library, and its administration has been very satisfactory, due to the efforts of Dr. Silverman and Miss Marshall.

Thanks to the efforts of the legislative committee and to a committee especially appointed, the chiropractors' bill was defeated, and in the name of the society, I take this occasion to thank the gentlemen who gave their time and efforts to this cause.

The Southern Medical Association came here with the greatest attendance that they have ever had at any previous meeting, and were entertained and taken care of in a manner highly satisfactory to ourselves, and if we can believe the expressions of many of our guests, it was also extremely satisfactory to them.

I do not feel that the society can be too extravagant in its thanks to Dr. Homer Dupuy and his committee for their untiring energy and unselfish thought of their own interests in engineering this really difficult task. It is very gratifying to all of us to feel that by our own subscriptions all of the bills for the entertainment of our guests have been paid, and that there is a modest surplus.

The statements I have just made are all to the credit side of last year's work. There is a matter now, however, to which I must refer, which I cannot feel is entirely to our credit, and that is the small attendance and lack of interest shown in the scientific meetings of this society. It is a deplorable fact that seldom is the attendance more than sixty out of a membership of four hundred and fifty. This is not due, I am sure, to the lack of excellent papers, and free discussions, and it has certainly not been the fault of the chairman of the scientific essays committee.

I feel that the active members of this society have so many meetings to attend which are almost compulsory that their time is so taken up that they are unable

to give a whole evening to scientific papers, when perhaps only one of the papers to be read deals with the subjects in which they are interested. I believe that some method should be worked out by which the scientific side of this society can be sectionized.

The only recommendation I have to make to the incoming administration is that they try to work out some such scheme.

Finally, my sincerest thanks are due to the gentlemen who served on last year's board. Their unfailing interest and courtesy was a constant stimulation.

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#### INAUGURAL ADDRESS OF PRESIDENT DR. URBAN MAES

In accepting the presidency of the Orleans Parish Medical Society I am actuated by mingled feelings of gratitude and humility, gratitude that you have seen fit to honor me, humility when I realize the responsibility of living up to the achievements of those who have preceded me in this office. With the co-operation of my fellow-officers, particularly the secretary and treasurer, who proved their loyalty and efficiency by long terms of faithful service, I am hoping that this year holds much of promise for us. For my own part, I am fully conscious of the duties I have assumed. I am bringing to my work enthusiasm and earnest endeavor, and I can assure you that errors committed during my term will be "the things I ought not to have done," rather than those of omission.

Our local medical societies should be true forums of medical and surgical thought and for that reason your executive committee, in conjunction with the scientific essays committee, will devote particular attention this year to improving the quality of our scientific meetings. As Else has well said, the education and training of a physician comprises not only his premedical years and his college and internship, but also his post-college training. That must be acquired in the school of experience and largely by his own efforts, but certainly the process can be shortened and the percentage of inevitable errors limited by the free exchange of thoughts and ideas. New and epoch-making discoveries are necessarily few, but after all the progress of medicine is dependent not only upon them but also upon gradual evolution and individual instances which, in their entirety, give us ample material on which to base conclusions. Therefore we hope to have

from you reports of individual investigations, reports of individual cases, statistical studies and papers on abstract and clinical subjects. These, with the discussions that follow, are bound to prove stimulating and of mutual help and advantage.

For the benefit of its members the Parish Medical Society maintains an excellent library under the charge of a competent librarian and containing not only standard medical texts but also bound volumes and current issues of the best medical journals. We are fortunate in its central location and particularly fortunate in the small expense incurred in its upkeep, through the generosity of the School of Medicine of Tulane University. An unfortunate duplication of effort, however, is the housing of two excellent libraries under one roof. Following the universal custom of pointing out to philanthropists how best they can spend their money, let me say that I can think of no more lasting service than the housing of these two excellent individual libraries in a permanent, fire-proof structure, the completion of the bound files of the journals already in their possession, and the foundation of an adequate endowment for equipment and maintenance. If this could come to pass the New Orleans Academy of Medicine would be excelled only by such institutions as the Philadelphia College of Physicians.

Another function of the local medical society has to do with national medical affairs. The Orleans Parish Medical Society is an integral part of the Louisiana State Medical Society, and, in turn, of the American Medical Association with its 90,000 members. Through close amalgamation with this national organization we should play our part in its body politic, which so largely influences medical thought in this country. The physician by his licensure and standing is entitled to membership in this organization, which is not a medical trust, as it is so often falsely called, but one of the greatest scientific and ethical bodies in the world.

The general public is largely misinformed concerning the medical profession and many of their misconceptions are due to our own secretiveness. I believe that the public should be acquainted with our activities and that our deliberations, so far as possible, should be open to them. Please understand that I am not advocating the exploitation of individuals; I am in hearty accord with the position of the committee on ethics of the American Medical Associa-

tion in that regard. But the chasm between physician and layman is as wide as it was between layman and priest when Luther bridged it with his translation of the Bible, and we still await some medical Luther to perform a similar task for us. Cults and cures and patent medicine evils will always flourish as long as we make a mystery of the facts of our profession. Moreover, the old cry that knowledge will only hurt the public has long since been disproved. The campaigns waged against tuberculosis and cancer have been productive of untold good, and we are still reaping the benefits of the dissemination of the truth about diabetes and the insulin treatment.

So much, then, for the function of the medical society. Now, what are the duties of its members? In the first place, unless scientific meetings are the concern of the individual member—not only of the men of tried experience, on whom too often the onus of such meetings falls, but even of the youngest and most untried man, who can be present if he can contribute nothing else—their function as a forum for thought and discussion must lapse entirely. The society belongs to the members, but it is of just as much value to them as they care to make it; it can be an active scientific body or it can be a dead organization to whom its members feel no further obligation than the payment of the annual dues, but what it shall be rests with the society as a whole and not with the executive committee.

Again, the latitude given the practicing physician calls for certain returns on his part. I think it was Theodore Roosevelt who said that every man owes some part of his time to the upbuilding of the profession to which he belongs. That is, no profession should be merely a means of gaining one's daily bread, important as that end is, and this should certainly be particularly true in the case of medicine, the most humanitarian of them all. For the trust imposed in him and the responsibilities he has assumed the physician owes much to his community and his country as well as to his individual patient and I feel very strongly that an active and useful medical society will play no small part in helping us to fulfill these obligations.

I have tried to give you very briefly some idea of what I think the Orleans Parish Medical Society should stand for and what part it should play not only in the profession but in the community. I know I am voicing the hopes of the officers you have elected to serve you in the statement

of these aims. Whether we shall achieve them rests with you, the body of the membership, but your presence here tonight makes me hope that the co-operation we have asked for is already ours. And again, I thank you.

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## ANNUAL REPORT OF SECRETARY FOR 1924

DR. LUCIEN LEDOUX

To summarize briefly the activities of a society such as this one is quite a task. Fortunately for me, the other officers and the chairmen of the many committees divide the duty of reporting the work accomplished during the past year.

Your board of directors had eleven meetings and carefully disposed of the business entrusted to them. They have worked incessantly, and have devoted every effort towards the betterment of the society.

The ways and means of stimulating a greater interest in our meetings and of developing our scientific programs have occupied the greater part of their attention. With your whole-hearted support, these plans should bear fruit during the coming year.

A total of 17 meetings were held, one installation, 13 scientific, two clinical and one special meeting arranged for Dr. Max Goldstein, of St. Louis. The guests of the society during the past year included Dr. Max Goldstein, of St. Louis; Dr. E. L. Armstrong, of Los Angeles, and Dr. R. R. King, medical missionary.

One of the chief accomplishments of the year was the entertaining of the Southern Medical Association which meeting was the largest attended in the history of the Association. The society took an active interest in legislation affecting the medical profession, and the interests of the public as well. Its stand in regard to hospital abuse and the removal of politics from the state's institution resulted in legislation that was satisfactory with much promise for the future.

The influence of the society was directed against the chiropractic bill, which was very happily defeated. I might suggest here that our future legislative committees study all pending legislation of a medical character so as to prevent the passage of legislation as embodied in the Ducro bill.

The formation of a new membership class, namely: Interne membership, is a progressive step that will add to our strength, scientifically and numerically.

The signing of a contract with the New

Orleans Medical and Surgical Journal completes the placing of the society on a thorough business basis.

The board of directors has repeatedly taken cognizance of the need for the revision of our by-laws. With this purpose in view a committee from the board is carefully considering this subject and hopes in the very near future to present a plan that will thoroughly modernize the workings of the society. After the completion of this work it is hoped to present every member with a copy of the constitution and by-laws so that he may better understand the purposes and workings of the society.

I have frequently felt the need for a closer intimacy among the membership. To my mind, nothing would be more beneficial than to meet socially once a year, preferably at an annual banquet. I hope this suggestion or possibly a better one will be considered, so that in the end we shall be better friends.

The office has been improved in many ways, and nothing has been spared to make it efficient and up-to-date. I contemplate making further improvements, and hope at the completion of my term to place the office on such a basis that it will practically run itself.

While preparing this report it occurred to me to make the following recommendations:

1. I believe that we should require of all applicants to membership a six months' residency. This would allow us more time to know our applicants and at the same time allow them to decide whether they intend to locate here permanently or not.

2. The number of special committees is too great. By combining most of them a better working organization will result.

3. Finally, the payment of dues in advance would materially assist us in our office work and hardly be a burden to anyone.

The membership of the society, January 1st, 1925, numbered 459, a gain of 34 members. Two members were re-instated, two failed to qualify, six resigned, 9 dropped for delinquency and there were two deaths.

Miss Maier has devoted herself wholeheartedly to the work entrusted to her and has made a most capable and efficient assistant secretary-treasurer.

In closing, I wish to thank the membership for their co-operation, and bespeak of them kindly consideration during the coming year.

## ANNUAL REPORT OF TREASURER FOR 1924

DR. JOHN A. LANFORD

To the officers and members, Orleans Parish Medical Society:

Gentlemen: I wish to submit a brief summary of the receipts and expenditures of the past year, limiting myself to the totals, as a detailed report would be too lengthy for publication. The report with the itemized receipts and expenditures is on file in the office and forms part of the records of the society for the past year.

Report of general fund:

Balance on hand, Jan. 1, 1924...	\$ 564.96
Receipts .....	7,669.23
Expenditures .....	6,881.95
Actual book and bank balance, Jan. 1, 1925 .....	1,349.34
Total office expenditures.....	102.17
Incidentals .....	326.74
Total special receipts .....	454.48
Total special expenditures.....	2,544.05

Respectfully submitted,  
JOHN A. LANFORD, M. D.,  
Treasurer.

## ANNUAL REPORT OF THE LIBRARIAN FOR YEAR 1924

DR. DANIEL N. SILVERMAN

The work of the past year represents the initial effort of the present librarian and his assistant to follow the line of progress so well exemplified in the reconstruction of the library under the guiding hand of our retiring president, Dr. Jamison.

During the month of August, a goal-post was reached when Miss Marshall reported that she had completed to date the cataloging of our entire collection.

The first of the New Year brings the total number of accessible volumes to 11,152. The new volumes acquired in 1924 number 768. Of these, 15 were purchased, 415 were gifts, 122 came through the New Orleans Medical and Surgical Journal, 181 were newly bound, and 35 were in the regular subscription. We wish to express our great appreciation of the gratuitousness of Mrs. Friedrichs and Mrs. Graner for the titles received from the libraries of our lamented conferees, Drs. Friedrichs and Graner, and also of Drs. P. B. McCutcheon, J. A. Lanford, R. A. Davis and C. C. Bass. Ninety-seven volumes were added to our library from the duplicate collection of Tulane. Numerous journals were also re-

quired from this source, many numbers filling gaps in our files.

The service of the library has compiled 11 complete bibliographies and many lesser references. The average daily attendance was approximately eight members.

The night hours of opening were discontinued on May 1, the Dean of the Medical School not thinking that the use of the library justified the expenditure incurred by the college.

The library committee met twice during the year, January 19th and October 13th, 1924. The attendance of the members was excellent and their advice an invaluable aid in the administration. It was shown at the last meeting that the expenditures for the

year came within the accruing interests on securities. The important matter of overdue books has been discussed and rules governing the same are being instituted. Additional space for books is needed in the growth of the library and provision is being made for new shelving.

The actual library expenditures, as detailed in an appended report, total \$1,477.96. The 1924 funds unexpended during the current year are \$50.36.

I wish to express my appreciation of the excellent co-operation of the assistant librarian, Miss Mary Louise Marshall, in our efforts to further the interests of the library and to render its services to the profession.



# MEDICAL ECONOMICS

*Chas. A. Bahn, M.D., Department Editor.*

## PRACTICAL ECONOMICS

### Part 7

#### (Income Tax Returns)

Next to the cash and carry store, the Federal Income Tax law has probably helped physicians more than any recent innovation. It has made us get our financial status in a reasonably correct form once a year. If only we would think a bit about what the figures really mean and would apply them in rendering the community more and better medical service, its value to us would be a hundred times greater. Time works wonderful changes,—perhaps even that will come. Every medical organization should yearly give a rising vote of thanks to Uncle Sam for having enacted this beneficial law which requires us regularly to find out what we have really earned, how much we have received in dollars, if not in sense, and what we have done with our earnings;—and all this without practically any cost, because we directly or indirectly pass this tax on to the consumer or patient, who really pays. Only so far as we are ultimate consumers do we directly or indirectly pay this tax. I wish my income tax were one hundred times greater because this would mean satisfactory medical service to a hundred times larger clientele, and in such an economical way that I received a reasonable share of my production. I cannot but smile when a doctor talks about his income tax return as though his body was being torn limb by limb.

But getting back to a more practical application of our subject, the present tax has several new features. Earned income or net receipts in 1924 from personal service as a physician, is subject to 25 per cent deduction.

All net income up to five thousand dollars, irrespective of production, is considered net income. In net incomes of more than \$5,000 the earned income is considered \$5,000 or more, in other words, if your net income from professional services is \$4,000 and your income from investments is \$4,000 you would deduct for earned income allowance \$5,000 and not \$4,000. The maximum allowance is \$10,000. Thus, if your net income from professional services was \$15,000, you may consider \$10,000 as earned income.

Everyone with a net income of \$1,000, if unmarried, or \$2,500, if married, or with a gross income of \$5,000, must render a return to the collector of internal revenue in his or her district. The return is generally to be made on Form 1040-A for net incomes of not more than \$5,000, and on Form 1040 for net incomes of more than \$5,000. It is presumed that you have before you the proper form in reading this article.

#### Form 1040-A

##### Income

Item 1. The amount should be taken from the recapitulation sheet of your daily cash receipts, less expense incurred as outlined in this department last month, or from your bank book, assuming that every dollar received has been deposited in the bank as it should have been.

The following items are exempt from tax and

should not be entered as income except possibly on back of form as a supplementary explanation: Life insurance policy proceeds, returned premiums, and annuity contracts, gifts by will or inheritance, interest of obligations of city, county, or state, Federal Farm Loan bonds, and Liberty bonds, proceeds of accident or health insurance, State and United States pensions, dividends or interest not exceeding \$300 from homestead associations and compensation from a city, county, or state position. A married man in this state could thus deduct \$600 interest from Homestead Association stock, representing approximately \$10,000 invested,—of course, the wife's return should also contain a deduction of the other \$300.

18. The credit of 25 per cent on earned net income previously described is here deducted.

##### Deductions

6. City and state taxes are deductible, but not Federal income taxes. Automobile license tag cost is taxable whether car is entirely for pleasure or business.

7. Contributions to funds or organizations operated exclusively for religious, charitable or educational purposes are considered deductions.

8. Items such as bad debts, losses from fire, theft, etc., not compensated for by insurance will here be listed.

##### Computation of Tax

12. Four hundred dollars each is allowed for legally approved dependents.

13. Unmarried persons are allowed an exemption of \$1,000, married persons of \$2,500.

#### Form 1040

##### Income

Item 1. Will contain the amount received as salaries, for example, as from Tulane University or other more or less remunerative positions.

2. Will contain the net income received from professional services, unless engaged in a partnership, when net income will be listed in item (4), the firm of course making a separate return.

6. The net profit from the sale of home or other property after deduction of real estate commission and expense necessary to put it in a saleable condition is taxable.

8. The interest on Liberty bonds owned in excess of \$55,000, if the net income is over \$10,000, is taxable.

##### Deductions

11. Interest paid not only on your business loans, but on loans for home purchase, etc., is deductible.

16. The depreciation allowable on automobile is 33 1/3 per cent per annum. State the date acquired and original cost, also the fractional use for pleasure which must be deducted. Automobile maintenance and operation which includes the amount spent for gasoline, oil, repairs and driver is entirely deductible, less, of course, the fractional use for pleasure. Office equipment should be depreciated at the rate of 10 to 15 per cent yearly based upon its estimated life. Subscriptions to professional journals are entirely deductible as are dues to professional organizations.

Professional books are deductible only on a depreciation basis. The expense incurred in attending medical meetings is unfortunately and apparently unjustly not deductible. These deductions should usually be clearly explained, if necessary, in an attached schedule "F."

#### Computation of Tax

If you are married and live in Louisiana you may file a separate return for yourself and wife, computing the tax as being equally divided between you and friend wife, thus saving the difference between two taxes at a lower rate and a single tax which might incur more normal tax at 4 or 6 per cent or surtax, which begins with net incomes of \$10,000. If you divide the tax in this way you should state under deductions, item 18 "(one-half of this amount carried to item 30 below, the remaining one-half being shown on the return filed by wife, Mrs. \_\_\_\_\_)".

19. As a minimum of \$5,000 is allowed as earned income on net incomes of \$5,000 or over you will show at least this amount, one-half being carried on your wife's return, if you are the proud possessor.

20. See Tax Computation on Form 1040-A, previously mentioned. If you and wife file separate returns only one-half of exemption would be noted on your return, the other half on your wife's return, thus if you are married and have two children \$1,650 would be noted on your return and the other \$1,650 would be noted on your wife's return. If you were married in 1924 the deduction therefore is made on a monthly fractional basis. New arrivals in the family will be considered as having arrived on Jan. 1, 1924.

Let us take, for example, the return of a married physician with two children who earned \$6,000 net from his practice and who had no other sources of income or deductions. All of this amount would, of course, be considered earned

income; \$3,000, or one-half of this amount, would be carried on his return under "Computation of Tax", the other one-half on his wife's return. Thus both the doctor and his wife would each carry \$3,000 as earned income, \$1,650 personal exemption and credit for dependents, with a balance of \$1,350 taxable at 2 per cent, which is \$27. The credit on this for earned income would be \$6.75, item (29), Item (30) would carry \$3,000 each on the doctor and on his wife's return, \$1,650 personal exemption is claimed in item (33), also on both returns, making a balance of \$1,350 taxable at 2 per cent, or \$27, item (46). In item (47) the 25 per cent deduction, or \$6.75 mentioned above, is subtracted, leaving the total tax \$20.25 each for the doctor and his wife.

#### Schedule A

If your books have been reasonably well kept it will not be difficult to arrange your disbursements on the fundamental classification of permanency which determines their depreciation as has been outlined in this department during the past several months. If your financial records have been badly and carelessly kept, no system or method can make them what they "ain't". Try to do the best you can with them; don't make the same mistake this year, and offer a silent prayer that the Revenue Inspector will not honor you with a visit until you have gotten your records in a reasonably intelligible form.

We will not discuss schedules B, C, D and E because of their limited application and our still more limited space. A supplementary schedule "F", however, may be needed in your return to clarify your deductions, such as automobile and other professional depreciations or expense.

We are indebted to Mr. Jumonville for having this article edited and revised by Haskins & Sells, Auditors.

# NEWS AND COMMENT

*Lucien A. Ledoux, M. D., Department Editor*

"Every man owes some of his time to the up-building of the profession to which he belongs."  
—Theodore Roosevelt.

## MONTHLY BULLETIN OF THE ORLEANS PARISH MEDICAL SOCIETY

During the past month in addition to the regular Board Meeting the Society held two meetings, the Annual Installation Meeting and a Scientific Meeting. Both of these meetings were largely attended and very successfully conducted. The attendance at these two meetings approximated at each meeting. The Scientific Meeting with an attendance of 200, papers were read by Drs. H. W. E. Walther, Erasmus D. Fenner and F. M. Johns. These papers have been turned over to the Journal for publication.

Of the four applicants elected at the last meeting three have qualified. The following applicants were elected to membership during the past month: Dr. R. T. Liles and Dr. Shirley C. Lyons to Active Membership, and Dr. George B. Grant and Dr. Guy E. Knolle to Active Interne Membership. The following applications are pending: Drs. F. L. Loria, R. O. Russell, H. L. Cohen, C. L. Cox and E. H. Lawson.

Members are requested to send in their dues as early as possible. Louisiana State Medical Society \$4.00 should be paid immediately so that our Society can be reported 100 per cent at the Louisiana State Meeting.

The President has appointed Dr. H. E. Bernadas as Chairman of the Arrangements Committee for the Louisiana State Medical Convention which meets in New Orleans in April. Serving with Dr. Bernadas as Chairman are the following members. Drs. John A. Lanford, P. Graffagnino, A. E. Fossier, E. L. Leckert, Elizabeth Bass, F. J. Chalaron, C. C. Bass, Paul J. Gelpi, Homer Dupuy and J. C. Menendez. Dr. Urban Maes, Ex-Officio Chairman, and Dr. Lucien Ledoux, Ex-Officio Secretary.

The 1925 Committee appointments will soon be announced. These Committees are entrusted with very important work of the Society. Your attendance at the few meetings necessary will be of help to us.

## AUDITOR'S REPORT

New Orleans, La.,  
July 7th, 1924.

Dr. John A. Lanford, Treasurer, Orleans Parish Medical Society, New Orleans, Louisiana:

Dear Sir:

Attached herewith please find report covering detailed audit of the books of the Orleans Parish Medical Society for the period of three years, 1921, 1922 and 1923.

A thorough check of all the records has been made. The General and Library Funds have been satisfactorily kept and all moneys properly accounted for.

The inventories of fixtures for accounts of the General and Library Funds were submitted to me without being priced. With the assistance of Miss Marshall the inventories were priced at realizable value as of December, 1923.

There are 11,000 books in the library and your librarian, Miss Marshall, figured that an estimate of \$2.00 each would cover their replacement value, and have accordingly figured the inventory of the library at \$22,000.00.

Respectfully submitted,

(Signed) L. L. JARREAU.

## SUMMARY OF AUDITOR'S REPORT

1921, 1922 AND 1923

Assets at December 31st, 1923	
General Account total .....	32,230.72
Library Account, including Bonds, Cash and Inventory of books in Library .....	26,299.67
Total net worth .....	\$58,530.39

## CASH STATEMENT

Cash on hand January 1st, 1921....	\$ 2,215.87
Receipts, 1921.....	\$ 9,264.11
Receipts, 1922.....	7,970.25
Receipts, 1923.....	7,178.58
	<hr/>
	\$26,628.81
Disbursements, 1921 ....	\$11,378.63
Disbursements, 1922 ....	7,848.77
Disbursements, 1923 ....	6,836.45
	<hr/>
	26,063.85

Cash on hand at December 31st, 1923. \$ 564.96

## INVENTORY OF FIXTURES AND BOOKS FOR ACCOUNT OF LIBRARY FUND

Inventory of Books .....	\$22,000.00
Inventory of Fixtures .....	1,566.00
	<hr/>
Total .....	\$23,566.00

(Signed) L. L. JARREAU,  
Auditor.

## SUMMARY OF AUDITOR'S REPORT, 1924

Assets at December 31st, 1924.	
Domicile fund .....	\$30,000.00
General account .....	1,920.68
Library account (including bonds, cash and inventory of books in library .....	28,601.53
Total net worth .....	\$60,522.21
Inventory increased in 1924,	\$1,125.20.

## CASH STATEMENT

Cash on hand December 31st, 1923....	\$ 564.96
Receipts .....	\$8,637.22
Disbursements .....	6,852.85
	<hr/>
	\$ 784.38

Cash on hand December 31st, 1924. \$1,349.34

## LIBRARY ACCOUNT

Cash on hand December 31st, 1923....	\$ 369.97
Receipts .....	\$1,918.32
Disbursements .....	1,877.96
	<hr/>
	\$ 40.36

Cash on hand December 31st, 1924... \$ 410.33

BULLETIN OF THE LOUISIANA STATE  
MEDICAL SOCIETY

The annual meeting of the Louisiana State Medical Society will be held in New Orleans on April 21st, 22nd and 23rd, the House of Delegates convening on April 20th. This will no doubt be another great State Medical Society gathering, as we all look forward with a great deal of pleasure toward seeing our friends in the City of New Orleans, and again enjoying the hospitality of the Orleans Parish Medical Society. It would, therefore, be quite proper for us to predict not only a meeting surrounded with many moments of pleasure, but also in keeping with our past will be able to enjoy a real scientific treat.

Plans are rapidly being developed to meet the above ends. The Scientific Program is rapidly being collected, and very shortly we will be able to present to our members a complete and comprehensive resume of the program. The Orleans Parish Medical Society have in their wisdom appointed Dr. H. E. Bernadas Chairman of the Arrangement Committee. The mere mention of his name would imply that you can look forward and will be such to realize a most enjoyable time in New Orleans at our Annual Meeting. The committee will not leave anything unturned or undone to make our meeting a success in every regard. We would, therefore, earnestly urge that you make your arrangements and plans early in the future so that you will not have anything to prevent your attending the meeting.

We are going to have some fine essayists from outside of our State. This will give one the opportunity of listening to what is being done along scientific lines not only in our state, but presenting some of the highest type of medical activities in this country. This should distinctly be an added privilege, and should insure good attendance.

We have just completed a wonderful year in 1924. I believe truly the best in our history, not only in our numerical strength, but in the many medical activities occurring during that time. From present indications we have every reason to believe that 1925 will outstretch our past records, and that during our annual meeting we will have the unusual opportunity of registering the highest number that ever attended an annual meeting. Our present enrollment for the year is in excess of previous years. This is always an indication of interest in our medical organization, and, therefore, gives promise of increased strength for the year. We are looking forward, therefore, with a great deal of pleasure to seeing the old faces with us again, and hope that we will have the pleasure at the same time of meeting new ones.

PARTIAL PROGRAM OF NEW ORLEANS  
MEETING

*Section on Pediatrics*

*Dr. John Signorelli, Chairman, New Orleans.*

- 1—"Intra-Muscular Injection of Ether in the Treatment of Whooping Cough," by Dr. J. E. Pollock, New Orleans, La.
- 2—Paper by Dr. Maud Loeber. Title not yet announced.
- 3—Paper by Dr. Roy de la Houssaye. Title not yet announced.

*Section on Bacteriology and Pathology*

*Dr. Willis P. Butler, Chairman, Shreveport.*

- 1—"The Essential Pathology of Scarlet Fever and Its Prevention," by Dr. Charles W. Duval, New Orleans, La.
- 2—"The Important Relationship of Post-Mortem Examination to Clinical Medicine," by Dr. Andrew V. Friedrichs, New Orleans, La.
- 3—"A Report of Cases of Gas Bacillus Infection with the Detail of Laboratory Investigation," by Dr. A. A. Herold, Shreveport, La.

*Section on Health and Sanitation*

*Dr. John Schreiber, Chairman, Monroe.*

- 1—"Greater Safety for Louisiana Babies."
- 2—"Tuberculosis; How to Reduce the Death Rate in Louisiana."
- 3—"Cancer; Reducing Its Ravages in Louisiana."
- 4—"The Chief Causes and the Prevention of Physiologic Old Age with Special Reference to Arterio-Sclerosis."
- 5—"Short Address by the Section Chairman."

*Section on Eye, Ear, Nose and Throat*

*Dr. Jules Dupuy, Chairman, New Orleans.*

- 1—"Value of a Routine Examination of the Eye in a General Diagnostic Clinic," by Dr. Monte Meyer, New Orleans, La.
- 2—"Tracheobronchial Diphtheria with the Demonstration of the Use of the Jackson Bronchoscope," by Dr. M. P. Boebinger, New Orleans, La.
- 3—"Insertion of Iris for Glaucoma and Results," by Dr. John S. Dunn, New Orleans, La.
- 4—"A Modification of McReynold's Operation for Pterygium," by Dr. E. L. Whitmire.
- 5—Paper by Dr. Roy Young. Shreveport, La.

*Section on Urology*

*Dr. P. Jorda Kahle, Chairman, New Orleans.*

- 1—"Prostatectomy," by Dr. M. H. Foster, Alexandria, La.
- 2—"Urinary Findings in 500 Consecutive Cystoscopic Examinations Seen in Consultation," by Dr. H. W. E. Walther and Dr. C. L. Peacock, New Orleans, La.

*Section on Radiology*

*Dr. S. C. Barrow, Chairman, Shreveport.*

- 1—"X-Ray Diagnosis of Colonic Lesions," by Dr. C. P. Rutledge, Shreveport, La.
- 2—"Roentgen-Ray Therapy," by Dr. Harold G. F. Edwards, Lafayette, La.
- 3—Paper by Dr. Lester J. Williams. Title not yet announced.

Chairmen of Sections for approaching meeting of the Louisiana State Medical Society to be held in New Orleans on April 21st, 22nd and 23rd, 1925:

Medicine and Therapeutics, Dr. W. J. Durel, Covington, La.

Pediatrics, Dr. John Signorelli, New Orleans, La.

Nervous Diseases, Dr. F. L. Fenno, New Orleans, La.

Bacteriology and Pathology, Dr. W. P. Butler, Shreveport, La.

Health and Sanitation, Dr. John Schreiber, Monroe, La.

General Surgery, Dr. L. B. Crawford, Patterson, La.

Gynecology and Obstetrics, Dr. P. B. Salatic, New Orleans, La.

Eye, Ear, Nose and Throat, Dr. Jules Dupuy, New Orleans, La.

Urology, Dr. P. Jorda Kahle, New Orleans, La.

Dermatology, Dr. M. T. Van Studdiford, New Orleans, La.

Radiology, Dr. S. C. Barrow, Shreveport, La.

## MONTHLY BULLETIN OF THE SHREVEPORT MEDICAL SOCIETY

February meeting of the Shreveport Medical Society, February 3rd, at Charity Hospital, at 8 p. m.

### February Scientific Program

Gleanings from the Southern Medical Society meeting. Dr. Louis Abramson, Dr. G. A. Caldwell, Dr. B. C. Garret, Dr. J. C. Knighton, Dr. I. B. Rougon, Dr. J. L. Scales. Talks limited to ten minutes each. Clinical Case, Dr. W. S. Kerlin.

Charity Hospital, January 6, 1925.

The regular monthly meeting of the Shreveport Medical Society was called to order by President Sanderson, who announced as his slogan for the year, "Let us know each other better." He prefaced his remarks by reading a poem by Edgar Guest, and closed with the request that the slogan be carried in each issue of the Bulletin. Applause. There were forty-two members present.

Minutes of the last meeting were read and approved. There were no committee reports. President Sanderson appointed Drs. Bodenheimer and Boyce a committee to draw up an application form for membership in the Society. Dr. J. M. Moseley, new Superintendent of Charity Hospital, was introduced by the President and made a short talk.

### Scientific Program

Dr. J. D. Young read a paper on Hiccoughs. Interesting, instructive, and at times amusing, discussion with report of clinical cases by Drs. Herold, J. D. Kerlin, Bodenheimer, Douglas, W. S. Kerlin, Butler, Thomas, Picard.

Under clinical cases Dr. Bodenheimer reported a case of eclampsia. Dr. Herold reported a case of human rabies.

### New Business

Dr. Walke reminded the members that the Tri-State Medical Society meets here next week, and asked for expressions of opinion as to possible entertainment. After some discussion the President empowered the special entertainment committee to commission a member in each office building to help raise any necessary subscription to be used for entertainment.

The President made an especial request that the members report clinical cases and that those having papers they wish to present to get in touch with the program committee. In order to remind the members individually of the meetings he suggested that the membership be divided up into about ten groups and asked for volunteers to have their office girls call up a group each. The following volunteered: Drs. Bodenheimer, Gowen, Douglas, Heath, Picard, Pirkle, Walke, R. C. Young, J. D. Young.

On motion the Society adjourned.

R. T. LUCAS, Secretary.

## LAFOURCHE VALLEY MEDICAL SOCIETY

The Lafourche Valley Medical Society was the guest on February 12th of the Lafourche Parish Medical Society in Thibodaux. Interesting scientific papers were read, and after the Scientific session the annual election of officers took place.

President, Dr. J. J. Ayo, Raceland; Vice-President, Dr. W. Pugh, Napoleonville; Secretary-Treasurer, Dr. Philip Dansereau. Dr. C. DeGravelle

of Morgan City, who was present, was elected honorary member.

After adjournment of the meeting a wonderful supper was enjoyed by the members at the Caferet Restaurant.

## THIRD DISTRICT MEDICAL SOCIETY

The Third District Medical Society was entertained by the Franklin medical profession in Franklin, La., on January 28th. The meeting was held in the City Hall, and papers were read by the following New Orleans doctors:

Dr. I. I. Lemann, "Thyroid." Dr. E. Denegre Martin, "Chronic Appendix." Dr. C. Jeff Miller, "The Management of Placenta Praevia." Dr. Roy de la Houssaye, "Feeding Problems."

Immediately following the scientific program the annual election of officers resulted as follows: President, Dr. C. M. Horton, Franklin; Vice-President, Dr. P. A. Boykin, Jeanerette; Secretary-Treasurer; Dr. H. G. F. Edwards, Lafayette.

A splendid spread was enjoyed at the Club Restaurant.

## ST. MARY PARISH MEDICAL SOCIETY

At a meeting on February 6th, 1925, the St. Mary Parish Medical Society elected the following officers:

President, Dr. Homer Gates, Franklin; Secretary-Treasurer, Dr. A. C. Kappel, Franklin; Delegate, Dr. L. B. Crawford, Patterson; Alternate, Dr. C. M. Horton, Franklin.

## LAFAYETTE PARISH MEDICAL SOCIETY

Lafayette Parish Medical Society elected the following officers for 1925:

President, Dr. Eric Guilbeau, Carencro; Vice-President, Dr. M. M. Mouton, Lafayette; Secretary-Treasurer, Dr. H. G. F. Edwards, Lafayette; Delegate, Dr. O. P. Daly, Lafayette; Alternate, Dr. R. D. Voorhies, Lafayette.

## CLAIBORNE PARISH MEDICAL SOCIETY

The Claiborne Parish Medical Society recently held a meeting at which time the following officers were elected for 1925:

President, Dr. J. A. Wilkinson, Homer; Vice-President, Dr. Henry Baucum, Haynesville; Secretary-Treasurer, Dr. E. B. Middleton, Homer; Delegate, Dr. F. Palmer, Blackburn; Alternate, Dr. J. W. Featherstone.

## CALCASIEU PARISH MEDICAL SOCIETY.

The Calcasieu Parish Medical Society recently held a meeting where the following officers for 1925 were elected:

President, Dr. Louis A. Hebert, Lake Charles; Vice-President, Dr. Geo. S. Kreeger, Lake Charles; Secretary-Treasurer, Dr. Louis K. Kushner, Lake Charles; Delegate, Dr. J. D. Tuten, Lake Charles; Alternate, Dr. R. G. Holcombe, Lake Charles.

Dr. J. L. Adams and Dr. J. Q. Graves, on their return from the meeting in Mobile of the American College of Surgeons, paid an official visit to the Louisiana State Medical Society in regard to matters of importance.

## ST. MARTIN PARISH MEDICAL SOCIETY

At the last meeting of the St. Martin Parish Medical Society the following members were elected:

President, Dr. S. D. Yongue, Breaux Bridge; Vice-President, Dr. C. W. Boring, Breaux Bridge; Secretary-Treasurer, Dr. P. H. Fleming, St. Martinville; Delegate, Dr. J. L. Beyt, St. Martinville; Alternate, Dr. P. H. Fleming, St. Martinville.

## TRI-STATE MEDICAL SOCIETY

The Tri-State Medical Society, of Arkansas, Louisiana and Texas, held a two-day session at the Hotel Youree, January 14th and 15th. The meeting was well attended, and from a scientific standpoint the best ever held by this organization.

Marshall, Tex., was selected as the next meeting place. Dr. J. A. Hendrick of Shreveport was chosen president, and Dr. Frank H. Walke of Shreveport re-elected Secretary.

## WASHINGTON PARISH MEDICAL SOCIETY.

The monthly meeting of the Washington Parish Medical Society was held January 29th at 8 p. m. in the dining-room of the Pine Tree Inn, Bogalusa, La.

The Scientific Program consisted of clinical cases and discussions, with a paper by an invited guest, Dr. Edward S. Hatch of New Orleans, who read a paper on Infantile Paralysis immediately following the Acute Stage. The discussion was opened by Dr. Slaughter and Dr. J. C. Brock.

This was the first meeting of the year, and the new officers presided. Every effort is being made to make the membership 100 per cent of the profession of the Parish.

## AMERICAN COLLEGE OF SURGEONS

The American College of Surgeons held their annual meeting in Mobile, Ala., on February 13th and 14th. The following doctors from Louisiana were present.

Dr. John A. Lanford, Dr. Russell E. Stone, Dr. Urban Maes, Dr. Rudolph Matas, Dr. R. C. Lynch, Dr. John D. Spelman, all of New Orleans; Dr. J. C. Willis, Shreveport; Dr. J. Q. Graves, Monroe; Dr. R. O. Simmons, Alexandria; Dr. W. B. Chamberlain, Baton Rouge; Dr. Louis B. Crawford, Patterson.

Dr. J. C. Willis was elected Chairman; Dr. C. G. Cole, Secretary, and Dr. J. Q. Graves, Councilor.

The next meeting will be held in New Orleans in 1925.

## DEATHS

Died, at New Orleans, Dr. J. B. Hart, February 9th, 1925, a resident and practitioner of this city a great many years.

Died, at New Orleans, February 10th, 1925, Dr. Paul Michinard, a member of the Orleans Parish and Louisiana State Medical Societies, a Professor of Gynecology and Obstetrics, graduate School of Medicine, Tulane University, and at one time Associate Editor of the New Orleans Medical and Surgical Journal.

Died, at New Orleans, February 11th, 1925, Dr. P. Albert Moore, a resident of this city and a member of the Orleans Parish and Louisiana State Medical Societies.

Died, at Franklin, La., January 29th, 1925, Dr. Beverly W. Smith, aged 55 years, from pneumonia. Dr. Smith was a graduate of Tulane University, Department of Medicine, 1891. He was a member of the Louisiana State Medical Society, American Medical Association, Southern Medical Association, and was Ex-President of the Louisiana State Board of Health.

Died, at Shreveport, La., January 30th, 1925, Dr. W. M. Adams, a member of the Shreveport Medical Society and the Louisiana State Medical Society.

## SHREVEPORT CHARITY HOSPITAL

First staff meeting of Shreveport Charity Hospital, under the superintendency of Dr. J. M. Moseley, took place at that institution on the evening of January 20th. Dr. Moseley announced the re-appointment of the previous chiefs of the different departments, and also the appointment of Dr. Willis P. Butler as pathologist. In the re-organization, Dr. J. E. Knighton was selected temporary chairman of the staff, and Dr. J. E. Heard was chosen secretary; a Committee consisting of Drs. Barrow, Garrett and Herold was appointed to draw up an outline of procedure for the regular meetings.

Following this an interesting clinical and clinicopathological session was held, and the meeting then adjourned till the third Wednesday in February.

## LOUISIANA TUBERCULOSIS AND PUBLIC HEALTH ASSOCIATION

Only one out of every nine cases of tuberculosis in Louisiana are registered with the parish and state board of health, estimated Frederick D. Hopkins, administrative secretary of the National Tuberculosis Association, speaking at the first annual meeting Wednesday noon in the headquarters of the Tuberculosis and Public Health Association of Louisiana. Scientific tests, declared Mr. Hopkins, showed that there are at least nine cases for every annual death, while the number of local cases reported were about equal to those of deaths.

Less than one-third of the cases of tuberculosis in Louisiana have been located, declared the speaker.

Mr. Hopkins announced that Dr. C. V. Unsworth, of New Orleans, was recently elected first Louisiana representative on the national board. This board, he explained, co-operated with the work of over 1500 tubercular associations throughout the country.

Briefly outlined, the National organization aimed to do three things: First, find the people with tuberculosis; second, to treat these cases, and, third, to prevent the spread of the disease by educational work. Several million children, he said, were members of the Modern Health Crusade. Short speeches were made by Father F. D. Sullivan, of Loyola; Mrs. Henry Alcus, and Mrs. Adolph Baumgartner.

The officers for 1924 were re-elected, with several additions.

## AMERICAN ASSOCIATION FOR MEDICAL PROGRESS, INC.

The Friends of Medical Progress, a National Lay Organization incorporated in Boston, Mass., in 1923, for the purpose of disseminating medical

knowledge among the general public, is contemplating for the year 1925 a greatly extended program of service.

Office headquarters, formerly located in Boston, have moved to New York City, 370 Seventh Avenue, where co-operation with the more important educational and health organizations will be facilitated. With the change in location also comes a change in name. The society will hereafter be called the American Association for Medical Progress.

Mr. Benjamin C. Gruenberg, well known to workers in the fields of education and public health, will take over the active management of the organization. In the past year approximately 72,000 publications dealing with various phases of animal experimentation, vaccination, etc., have been distributed. An increasing number of similar publications is planned for the current year. A lecture program will be developed and attention will be focused on the formation of branch organizations throughout the country.

#### ITALY PROTECTS MOTHERS

The Italian Government has definitely announced its intention of ratifying the Washington Maternity Convention adopted by the International Labor Organization Conference in 1919. This convention prohibits the industrial employment of women for six weeks before and six weeks after childbirth, and insures free medical attendance and maintenance for mother and child during the period of absence from work. In Italy the maternity fund already provides for insured women a money grant during the weeks immediately preceding confinement. The adoption of the Washington Convention would simply entail a further development of the machinery now existing.

A study of the germ-killing action of ultra-violet rays has been made by the Bureau of Standards Department of Commerce, covering the range of wave lengths from just beyond the limit of the visible spectrum down to the shortest wave lengths emitted by a mercury vapor arc in a quartz lamp.

The shortest waves were found to have the most pronounced and vigorous action, being capable, when sufficiently intense, of producing death with an exposure of only one second. Longer wave lengths required a great intensity and acted much more slowly, but a killing action was found to result even from waves as long as 365 millionths of a millimeter, which is almost as long as the shortest waves visible to the human eye. Prior to this experiment doubt had been expressed regarding the ability of these longer waves to kill bacteria.

#### ANNOUNCEMENT

The Ninth Annual Clinical Session of the American Congress on Internal Medicine will be held in Washington, D. C., March 9-14, 1925.

A decrease in infant mortality in Germany during the past five years as compared with the pre-war period, is reported by the *Soziale Praxis*, Berlin. The rate has dropped from 150 per 1,000 live births in 1913 to 132 in 1923. As compared with the United States rate for 1923, which was 77, Germany's rate is still very high.

A Commission to study Cancer, to consist of international medical authorities, has been appointed by the Health Committee of the League of Nations. The Commission will consist of Sir George Buchanan as Chairman, and Dr. Lutrarie, an Italian; Dr. Jitta of the Netherlands, Professor Leon Bernard and Dr. Carriere of France.

The first work of the Commission will be a comparison of the statistics of Great Britain, Italy and the Netherlands relating to the cause of the difference shown to exist between the cancer mortality of these countries. The Cancer Commission was further empowered to extend its investigations into the epidemiology of cancer in general as far as circumstances will permit.

#### ANNOUNCEMENT OF ARRANGEMENT COMMITTEE OF THE LOUISIANA STATE MEDICAL SOCIETY

The chairmen of the various committees of the general arrangement committee include the following personnel:

- Committee on Finance—Dr. John A. Lanford.
- Committee on Registration—Dr. P. Graffagnino.
- Committee on Booths—Dr. A. E. Fossier.
- Committee on Signs & Decorations—Dr. E. L. Leckert.
- Committee on Badges—Dr. Frank J. Chalaron.
- Committee on Scientific Exhibits—Dr. Foster M. Johns.
- Committee on Entertainments—Dr. Paul J. Gelpi.
- Committee on Publicity—Dr. Homer Dupuy.
- Committee on Hotels—Dr. J. C. Menendez.

This committee makes the important announcement that a grand ball will follow the president's reception on Wednesday night, April 22nd.

Esculapius will preside over the Scientific Program of this meeting, which promises to be of a high order. But, to relieve the tension and fatigue entailed by this serious work, Terpsichore will touch the lighter side of our lives and will entice young and old "to trip the light fantastic."

The committee expects a large attendance of the fair sex. Out-of-town members are strongly urged to bring their wives and daughters with them. This get-together at the Atheneum will be a wonderful opportunity for the renewing of old friendships and the kindling of new ones.

#### PUBLICATIONS RECEIVED

C. V. Mosby Company, St. Louis: "Operative Surgery," by J. Shelton Horseley, M.D., F.A.C.S. "Infection, Immunity and Inflammation," by Fraser B. Gurd, B.A., M.D., C.M., F.A.C.S. "An African Holiday," by Richard L. Sutton, M.D., LL.D.

J. B. Lippincott Company, Philadelphia and London: "The Crippled Hand and Arm," by Carl Bec, M.D. "The Diagnosis of Children's Diseases," by Professor Dr. E. Feer. "Fractures and Dislocations," by Philip D. Wilson, A.B., M.D., F.A.C.S., and William A. Cochrane, M.B., Ch.B., F.R.C.S. Edin.

W. B. Saunders Company, Philadelphia and

London: "Physiology," by William H. Howell, Ph.D., M.D., Sc.D., LL.D. "Surgical Pathology," by William Boyd, M.D., M.R.C.P. Ed., F.R.S.C.

P. Blakiston's Son & Co., Philadelphia: "The Effects of Inanition and Malnutrition upon Growth and Structure."

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REPRINTS

"Smallpox in the United States; Smallpox in Our Insular Possessions; Smallpox in New England; Smallpox in Massachusetts, 1913-1923," by Samuel B. Woodward, M.D., Worcester, Mass.

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The Shreveport Medical Society had the honor of having Dr. Victor C. Vaughan as its guest at the regular monthly meeting on February 3rd. Dr. Vaughan entertained and enlightened the doctors with his talk relative to medical progress in 1924.

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Dr. Oscar Dowling, President of State Board of Health, spent several days in Shreveport in February, aiding the state and federal officials in the investigation of narcotic drug traffic in Cad-do parish. At a special meeting of the Shreveport Medical Society held February 14th, resolutions pledging the aid of the profession were unanimously adopted.

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 HOUSE OF DELEGATES, APRIL 20

APR 16 1925

NEW ORLEANS  
**MEDICAL AND SURGICAL**  
**JOURNAL**



Owned and Published by THE LOUISIANA STATE MEDICAL SOCIETY

OFFICIAL ORGAN MISSISSIPPI STATE MEDICAL ASSOCIATION AND ORLEANS PARISH MEDICAL SOCIETY

\$2.00 per Annum, 25c per Copy  
 Volume 77, Number 10

APRIL, 1925

Published Monthly in New Orleans  
 at 1551 Canal Street

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Next Annual Meeting Louisiana State Medical Society, New Orleans, April 21-23, 1925  
 Next Annual Meeting Mississippi State Medical Association, Biloxi, May 12-14, 1925

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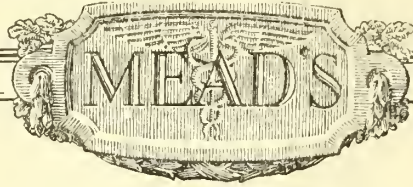
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## Surgical Journal

Vol. 77

APRIL, 1925

No. 10

### INSULIN IN THE HANDS OF THE GENERAL PRACTITIONER.

I. I. LEMANN, M. D.  
NEW ORLEANS.

The reaction of the profession to the use of insulin has, it seems to me, proceeded in general in two wrong directions. There has been naturally enough a fear of this potent agent. Its use was for a long while after its discovery restricted to specialists and repeated warnings have been given out that the careless administration was fraught with grave dangers. Then, too, most of the articles concerning insulin which have appeared have been directed chiefly to the narrow circle of men who have made a particular study of diabetes and the attempts to simplify the directions for diet and insulin have not been altogether successful and\* have often served still further to mystify the already puzzled practitioner. This attitude on the part of the profession is reflected in the survey I have made of the deaths from diabetes or from causes complicated with diabetes in New Orleans in 1923. Under the sanction and with the co-operation of Dr. E. L. Leckert, president of the city Board of Health, (to whom my thanks are due) I wrote to each doctor signing such a certificate asking him to answer a brief questionnaire. There were 85 deaths from diabetes and from causes complicated by diabetes in New Orleans in 1923. Of these:

- 20 died in Charity Hospital.
- 3 died in Touro Infirmary.
- 3 died in Hotel Dieu.
- 1 died in the Presbyterian Hospital.
- 2 died in the Flint-Goodridge.
- 56 died in their homes.

Of the 56 deaths occurring outside the institutions, I was able to learn about 26. Of these 26, two were given insulin.

There has been, on the other hand, in many instances, I fear, a rashness and laxity in the use of insulin which must sooner or later cause fatalities. Even where fatalities do not occur these methods are bound to bring undeserved disrepute upon one of the greatest boons ever vouchsafed mankind and to cause patients to turn from it and place themselves in the hands of charlatans. From time to time reports are brought to me by patients of dreadful misapplications of insulin. For example, I have had one patient to whom insulin had been given three times a week, and another to whom it had been given once a week. In neither instance had there been the slightest attempt at a proper arrangement of the diet, or a proper relationship between the time of meals and the administration of the insulin. In both cases there had occurred with each dose of insulin the phenomena of insulin shock, true only the minor phenomena which fortunately disappeared promptly because food was soon taken. The insulin, in other words, made these patients sick each time and conferred no lasting benefit. The second patient was informed at each weekly injection that he was getting better and might look forward to a cure. Such conduct on the part of the doctor not only indicates ignorance of the crassest sort, but smacks strongly of quackery.

The number of diabetics in the United States has been estimated as high as one million. It is apparent at once that even if we assume a large error in this estimation it is impossible for the care of diabetics in general to fall entirely or chiefly into the hands of specialists. The profession at large cannot evade its responsibility for the care of diabetes any more than it can its responsibility for the care of tuberculosis. Doctors must learn some of the simple rules at least for the diet of their diabetic patients. The rules for the use of insulin are exceedingly simple, once one has mastered

\*Read before the Orleans Parish Medical Society, December 8th, 1924.

the underlying principles of the diet, and if a doctor is qualified to care for a diabetic at all he is qualified to use insulin. The fundamental difficulty lies in the fact that the profession has failed to appreciate that:

1. Diabetes is a quantitative as well as a qualitative disease. Patients are able to care for food stuffs in varying degrees, proportionate to the impairment of their pancreatic (islet) function and the severity of their disease.

2. The diet for the diabetic must represent quantitative as well as qualitative restriction. Patients must be told **WHAT** and **HOW MUCH** they should eat. The directions should not be merely prohibitions.

3. Insulin is not a cure. Its action is fleeting, remaining only a few hours. It provides artificially what the diabetic patients lack for the utilization of their food. It must be administered every day, once at least, and in some cases two, three, and even four times.

My purpose in presenting this paper is to show:

First, that the handling of mild cases at any rate is not difficult nor complicated.

Second, that the plan for the rescue from diabetic coma may now be set in such standardized stereotyped terms that he who reads may learn to apply successfully.

To illustrate my first point, I wish to show the charts of two patients who have been treated entirely in my office and who have not been hospitalized one single day. They are examples of course, of a larger series. (Tables 1 and 2.)

Arbitrarily these patients are put on a diet for 24 hours of 100 grams carbohydrate, 50 grams protein, 50 grams fat to be divided into three meals. It is exceedingly easy for any doctor in a few minutes time to learn how to pick out from Joslin's card (Table 3) the foodstuffs which will make up these quantities. It is my custom, at first, to hand out to patients a list of foods with quantities worked out which will make up the quantities prescribed (Table 4.) The second and third days a diet of C. 50, P. 50, F. 50 is prescribed. If this does not suffice to bring the urine free of sugar it is judged necessary to use insulin. In order that we may determine whether this is the case, the patient is made to bring the urine every day,—all the urine collected in 24 hour quantities, not simply a specimen of one voiding. An initial examination of the blood for glucose content should be made to establish the diagnosis. The repetition of this examination during the course

of the treatment is, of course, desirable and advantageous but it is by no means essential to the successful handling of a routine mild or moderately severe case in the hands of the general practitioner. The quantitative estimation of the urinary sugar is very easy and should be done because of the great assistance and information it affords, but even this might possibly be dispensed with and the doctor depend upon the rough estimation of the intensity of the qualitative Benedict reaction. He must, however, make the test with an aliquot sample of the 24-hour collection of urine.

If the urine becomes sugar free without insulin upon the preliminary diets we proceed to add gradually to these diets until a maintenance diet for the given patient is reached. This diet is based upon the average weight of persons of the same sex, age and height of the patient.\* Ten per cent is deducted from this weight. The maintenance diet should furnish 2-3 to 1 gram of protein per kilogram (2.2 lbs.) and 30 calories per kilogram. It should furnish, also, in my opinion, a minimum of 50 grams of carbohydrate. Wilder, in a recent paper, advocates a simple and, I believe, very practical and desirable rule: 1 gram carbohydrate, 1 gram protein, and 2.5 grams fat per kilogram.

If sugar reappears in the urine before this diet is reached insulin must be employed to permit the patient to utilize this amount of foodstuffs. When it has been determined that the patient should be given insulin we have him come to the office in the morning before breakfast for his hypodermic for the first five or six times. We teach him during this time how to administer the insulin to himself, how to care for his syringe, how to make a qualitative test of the urine for sugar, and how to calculate his diet. He is drilled, too, in the phenomena of insulin overdosage, and how to combat them. We begin on the first day with two units of insulin and add gradually two units at a time until the glycosuria is entirely controlled. In general we may expect one unit of insulin to care for from two to four grams of urinary sugar. We now permit the patient to make semi-weekly, then weekly, then bi-weekly visits, finally discharging him with instructions to report once monthly, then finally every few months. All patients are instructed to file with us a weekly report (Table 4) giving details of diet, insulin, result of Benedict

\*Tables of these weights are published by Thos. Groome & Son upon a card.

Table No. 1.

No. 1. Name, Frank M.—. Hospital Age: 61. No. 2381. Net Height, 5 feet 10 inches. Net Weight 127 lbs.

Date 1924	Vol. C. C.	Sp. Gr.	Reac.	DIET IN GRAMS							Naked Weight Pounds	Blood Sugar Mgs. per 100cc.	Insulin Units Order Given	REMARKS.
				Acetone	Di-acetic Acid	Sugar in Urine Per Cent.	Carbohydrate	Protein	Fat	Calories				
October 2	1960	1030	AC	+++	++	10%	..	..	..	..	..	..	..	Urine: Yeast cells, many mucus and urates.
3	2033	1036	AC	+++	+	10%	92	49	50	1014	266	..	..	Blood: Hemoglobin 90 %. No abnormal cells found in smears.
4	2330	1020	AC	+++	—	10%	68	51	48	912	211	..	..	Wasserman: Negative
5	2770	1010	AC	+++	—	8%	48	49	48	824	..	..	..	
6	2540	1024	AC	++++	+	6.5%	48	49	48	824	..	..	..	
7	2000	1008	AC	F.Tr.	—	0.67%	50	48	84	1188	..	4	..	
8	2600	1010	AC	++	—	1.4%	50	48	103	1319	..	5	..	
9	3000	1006	AC	—	—	Tr.	60	50	100	1340	..	7	..	
10	3450	1010	AC	+	—	Tr.	60	50	120	1520	..	6	..	
11	2360	1008	AC	F.Tr.	—	—	60	50	120	1520	..	6	127½	
12	3180	1006	AC	—	—	—	60	50	120	1520	..	5	..	
13	2150	1010	AC	+	—	—	60	50	120	1520	..	5	..	
14	.....	.....	..	..	..	.....	60	50	145	1745	235	5	235	
15-16-2850	.....	.....	..	..	..	—	60	50	145	1745	200*	7	200*	

Rx C. 60. P. 50. F. 145 Insulin, 7 units.

test, (expressed red, yellow, green, blue) and the body weight. I show also a sample diet with the details of its calculation (Table 5).

I direct your attention now to an even more important function devolving upon the general practitioner, namely the rescue of a patient from coma or impending coma. A specialist is not always at hand, nor may it be always feasible to transport the patient to a hospital (though this latter, in my opinion, is very desirable). For the sake of brevity I confine myself here to a bare statement of the indications for treatment and an outline of instructions.

The cause of the coma is the acidosis, that is to say, the impairment of the alkali reserve of the blood by the ketone bodies. These ketone bodies are produced by the incomplete combustion of protein and fat, which incomplete combustion is brought about by the inability of the diabetic to burn carbohydrate (glucose). The protein and fat may be compared to the coal, the carbohydrate to the kindling, the ketone bodies to the smoke. When the kindling does not burn because of lack of proper draft the coal is incompletely burned and smoke is produced. Insulin is the draft and when it is provided the kindling (carbohydrate) burns with a roar and the coal (protein and fat) is entirely consumed and no smoke (ketone) is produced; in fact,

any previously existing smoke is consumed.

In addition to the impairment of the alkali reserve these patients are desiccated. They resemble in many respects patients suffering from shock. The surface is cold and dry. The respiration is rapid and "pumping." The tongue is dry, parched, and fiery red. For such a patient the indications are to furnish: 1. Heat. 2. Fluids. 3. Insulin. 4. Carbohydrate to be burnt by the insulin. I have not found it necessary to use soda either by mouth or by vein. I have rarely had to use digitalis as advocated by some.

The instructions which I have come to use in almost stereotyped fashion are these:

1. Hot water bottles. Keep patients warm.
  2. Hypodermoclysis, normal saline, 1,000 cc.
  3. Proctoclysis—warm tap water constantly.
  4. Warm drinks. Tea, coffee, water, 4 ounces every hour.
  5. Carbohydrates, 10 grams every 4 hours equal to oatmeal 5 tablespoons, or orange juice 3 ounces, alternating.
- Insulin before each feeding, every 4 hours:  
 20 units if Benedict test is red.  
 15 units if Benedict test is yellow.  
 10 units if Benedict test is green.  
 0 units if Benedict test is blue.

In completely established coma the initial dose of insulin would be fifty units. If I had no facility for the determination of the blood sugar level I would buffer this by giving glucose intravenously, say 1-2

Table No. 1A.

No. 2. Name, Mr. Frank M—. Age: 61. No. 2381.

—DIET IN GRAMS—

Date 1924	Vol. C. C.	Sugar in Urine Reduction Per cent	Carbohydrate	Protein	Fat	Calories	Naked Weight Pounds	Insulin Units Order Given	Insulin Units Time Given	REMARKS
October 17 & 18	2375	Tr.	60	50	145	1745	...	7	7 0 0 7	
19 & 20	2375	—	60	50	145	1745	...	7	0 0 7	Rx: C. 60. P. 50. F. 180. Insulin: 10 units.
21	2375	Tr.	60	50	145	1745	126	7	0 0 10	No more cramps. Weak spells over.
22 to 24	2000 to 2500	—	60	55	185	....	129	10	0 0 6	Feels fine.
24 to 27	2500	—	*70	55	185	....	130	6	0 0 6	*Insulin symptoms Oct. 25, 26, 27. Relieved immediately by orange juice, 3 oz.
Oct.-Nov. 27 to 4	2500	—	70	55	185	....	129 ½	6	0 0 6	
November 4 to 18	....	—	70	55	185	....	131	6	0 0 0	Could not feel better. No more symptoms.



Table No. 2.

No. 1. Name, Mrs. G. H.—. Age: 54. Net Height, 5 feet 2 inches. Net Weight, 150 1-2 lbs. No. 2412.

Date 1924	Vol. C. C.	Sp. Gr.	Reac.	Alb.	Indican	Acetone	Diacetic Acid	Reduction Per cent.	DIET IN GRAMS					Calories	Naked Weight Pounds	Blood Sugar Mgs. per 100 cc.	Insulin Units Order Given	REMARKS.
									Carbohydrate	Protein	Fat	Protein	Fat					
October 20	660	1040	AC	F. Tr.	—	+++	—	20%	92	49	50	1014	150½	...	...	...	Blood: Hemoglobin 90%. No abnormal cells found in cells. 10-21-24: Blood Wassermann: Negative.	
21	840	1042	AC	—	—	++++	—	10%	71	46	45	873	.....	...	6	6		
22	860	1040	AC	—	—	+++	—	7%	44	48	47	791	150¼	210	6	6		
23	1000	1022	—	—	—	+++	+	3.3%	46	45	79	1074	.....	185	6	6		
24	840	1028	AC	—	—	+++	Tr.	4%	50	49	80	1116	153½	...	10	10		
25	780	1020	AC	—	—	+++	—	F.tr.	50	50	81	1129	.....	...	10	10	Rx. C. 50. P. 50. F. 80.	
26	1300	1010	AC	—	—	+	—	v.f.Tr.	49	47	81	1113	.....	...	10	10		
27	1000	1018	AC	—	—	+++	—	Tr.	49	50	101	1305	.....	...	10	10		
28	1100	1014	AC	—	—	+	—	—	50	50	97	1273	.....	...	10	10	Pruritus much less. Feels better. No thirst.	
29	1091	1020	AC	—	—	+++	—	—	48	52	94	1246	153	...	10	10	Rx. C. 50. P. 50. F. 100.	
30	1180	1008	AC	—	—	+	—	—	50	50	120	1480	.....	...	10	10		
31	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
November 1	....	....	..	..	..	.....	..	..	50	50	120	1480	.....	...	10	10		
2	1150	1021	AC	—	—	+++	—	—	50	50	120	1480	.....	...	10	10	Feeling fine. Plenty of pep. No pruritus. Rx. C. 50. P. 50. F. 120.	

Table 3.

30 Grams 1 Ounce. Contain Approximately.	Carbohy-	Protein	Fat	Calories
	drates	G.	G.	
Oatmeal, dry weight .....	20	5	2	118
Shredded Wheat .....	23	3	0	104
Uneda Biscuits, two .....	10	1	1	53
Cream, 40 per cent. ....	1	1	12	116
Cream, 20 per cent. ....	1	1	6	62
Milk .....	1.5	1	1	19
Brazil Nuts .....	2	5	20	208
Oysters, six .....	4	6	1	49
Meat (cooked lean) ..	0	8	5	77
Chicken (cooked lean) ..	0	8	3	59
Bacon .....	0	5	15	155
Cheese .....	0	8	11	131
Egg (one) .....	0	6	6	78
Vegetables, 5 per cent. group .....	1	0.5	0	6
Vegetables, 10 per cent. group .....	2	0.5	0	10
Potato .....	6	1	0	28
Bread .....	18	3	0	84
Butter .....	0	0	25	225
Oil .....	0	0	30	270
Fish, cod haddock (cooked) .....	0	6	0	24
Broth .....	0	0.7	0	3

gram for each unit of insulin. While I prefer not to give the intravenous glucose, I wish to stress the fact that we are combating the acidosis, not the hyperglycemia. The excess of kindling cuts no figure. What we aim to do is to cause a bright blaze with adequate kindling; if some remains unburnt this is not of prime importance for the time being. We must, however, be sure that adequate kindling (glucose) is present. If our excessive draught (insulin) causes the combustion of all or nearly all the kindling (glucose) our patient runs the grave risk of insulin coma.

When the patient has been rescued from the coma and is without evidence of acidosis for forty-eight hours we begin gradually to bring him to a maintenance diet and with proper insulin dosage. This is done by the successive steps of: (1) dividing the 60 grams of carbohydrate (10 grams every 4 hours—10x6 in 24 hours) hitherto given, into three meals instead of six meals and similarly dividing the twenty-hour insulin dosage into 3 doses instead of 6 doses; (2) adding daily 5-10 grams of protein and 20-30 grams of fat until the maintenance diet is reached, and (3) adjusting the daily insulin dosage up or down as indicated.

Table No. 4.

Sample Weekly Report.				
Name.				
Date.	Diet.	Urine.	Insulin.	Weight.
11-2-24	50-50-100	Blue	6-0-6	127 lbs.
11-3-24	50-50-100	Green	6-0-6	127 lbs.
11-4-24	50-50-100	Blue	6-0-6	.....
11-5-24	50-50-100	Blue	6-0-6	128 lbs.
11-6-24	50-50-100	Green	6-0-6	128 lbs.
11-7-24	50-50-100	Blue	6-0-6	.....
11-8-24	50-50-100	Blue	6-0-6	129 lbs.

Table No. 5.

Sample Diet.

C. 100, P. 50, F. 50.

	C.	P.	F.
Oatmeal, 1 ounce dry weight ..	20	5	2
Potato, 4 ounces .....	24	4	0
Orange, 2 .....	20	0	0
Milk, 8 ounces .....	12	8	8
5% vegetables, 16 ounces...	16	8	0
Meat, 3 ounces .....	0	24	15
Butter, 1 ounce .....	0	0	25
	92	49	50

DISCUSSION

Dr. F. W. Parham: In getting these patients to co-operate—some of them are rather an ignorant class, not always people of intelligence—how do you go about teaching them, so as to approximate the proper amount of calories?

Dr. J. A. Devron: I saw a discussion of insulin in a magazine sometime ago where the doctor said it was dangerous to let the patients make their own urinalysis. In one or two cases they found sugar in the urine and he believed they became comatose from the insulin. The blood sugar was found to be 50-60 instead of 80-124 mg. per 100 cc. Have you had similar cases where the urine would show sugar and the blood sugar was very low?

Dr. I. I. Lemann (in conclusion): I must confess myself very much disappointed. I had hoped that there might be some questions asked. I have felt the responsibility very keenly, since the Rockefeller money was given for the spreading of knowledge, in trying to get such lessons in such terms that others can understand. While we have had two or three physicians come for instructions, we have had a mere handful of the local profession. Once or twice I have spoken before local doctors and this present attempt was made to stimulate discussion. As Dr. Guthrie has stated, it has been his endeavor and mine to avoid technicalities. We have tried to extract the essentials from what we have been able to read of the experiences of others in different places and our own experiences here, and boil these down to terms understandable to the man

who is not a specialist in diabetes. That is the reason I desire to bring to your attention directions covering diabetic coma, which is an emergency necessitating immediate action; one cannot stop to find out who can help him; he may be in such a place that he cannot get anybody. I think it is necessary then to put these instructions in terms other than blood sugar, because blood sugar examinations are not always available; they are technical and difficult. One must, therefore, depend largely upon urine sugar. It is necessary to have urine tests made of the twenty-four hour collection. That is a point the importance of which I wish to stress: get samples for twenty-four hours, not a sample of one voiding. Repeated experiences show sugar in the afternoon and none in the morning, and if one trusts to a single specimen and the findings are negative he might be misled. I think one might even depend upon the intensity of a qualitative Benedict test, and I would much rather that the patient would be in the hands of a doctor who would insist on the twenty-four hour specimens and not depend on the quantitative estimation of sugar in one single voiding.

Answering Dr. Devron's question. There have been some men who have preferred not to keep their patient's urine entirely free of sugar, more particularly in the case of children. Glyelin, of New York, who has done a great deal of work in diabetes of children is in the habit of permitting them to run a little sugar. The consensus of opinion, however, is that adult patients, and children, too, are better off if you keep their urine free of sugar. On the other hand, we must keep them free of symptoms of insulin shock. This is usually easily done—only in a few cases have we experienced any difficulty. One is a case that Dr. Guthrie is watching at the Charity Hospital; the other our prize patient (the first patient with insulin) who has had a remarkable career. On a certain diet with a given amount of insulin she will run quite a bit of sugar; if we attempt to increase the insulin she has insulin shock, so we are having trouble on the one hand keeping her urine free from sugar, and avoiding insulin shock on the other.

The point Dr. Devron has brought out is of frequent occurrence. I tried to show this on the screen. After the pancreas has had a rest with the crutch of the insulin, it begins to pick up and furnish its own insulin to a certain extent. Some patients improve to such an extent that insulin may be discontinued and the patient still be able to take a maintenance diet.

In answer to Dr. Parham's question. We classify our patients into:

(a) People who have sufficient intelligence to weigh their food. This is a great advantage; eventually some do not have to use the scale for they train themselves to recognize by measure the size of a given weight. Even these patients, however, I instruct to weigh their food periodically so as to keep it standard.

(b) Patients who have neither the intelligence to weigh, nor the patience, but have the intelligence to calculate diet by measure rather than weight. Instead of giving them directions in terms of weight, we prescribe so many table-spoonsful of oatmeal; so many of milk; such a proportion of meat; a teaspoonful of butter, etc.

(c) People who are so ignorant that we cannot teach them to calculate. In this class we have an exact list of what they may have—for instance: your breakfast is so and so—an egg, an

orange—just that and no more, no less. They may not vary that breakfast. Similarly the other meals are given in detail and no variation is permitted.

The third class, as Dr. Guthrie has stated, is surprisingly small. Dr. Guthrie has a wonderful clinic. With the assistance of the clinic secretary, who is a remarkable teacher, even the most ignorant negro is instructed how to regulate his diet in some way.

## THE OLD AGE PROBLEM.\*

W. B. DICKINS, M. D.

GREENWOOD, MISS.

It is the desire of every normal man to live as long as possible. How to prolong life, the "Old Age Problem," is not a new question. It is as old as Father Time and it will continue to be a question long after we are gone. The period of human life has been divided by physiologists into Infancy, Childhood, Youth, Maturity, and Old Age. Normally the first signs of old age begin about the age of 50.

I. Old Age—Defined.—"Old age is that period of life in which the degenerative changes, that set in after maturity, become apparent." This does not correspond to any definite term of years, but is hastened by want, confinement, hardship, mental anxiety, exposure, bad habits, accidents, and disease. Some people may be old at 40 and some young at 70.

Is old age a disease?—One authority says that "old age is a chronic progressive disease, caused by sedentary deposits in the vascular system, elasticity giving place to inelasticity, which finally affects the entire body." In other words according to this authority senility is synonymous with arterio-sclerosis,— "a man is as old as his arteries."

Sir Victor Horsley says that "Old age is a disease, due to a degeneration of the thyroid gland which governs the whole circulatory system, causing symptoms synonymous with chronic myxoedema."

Dr. Lorand, in his "Old Age Deferred," says, "Old age is a disease due to the degeneration of all the ductless glands, the thyroid, adrenals, and gonads in particular" Thus the expression, "a woman is as old as her ovaries."

Dr. Metschnikoff, of Pasteur Institute, Paris, says, "Old age is a disease of auto-intoxication, due to intestinal putrefaction

\*Read before the Delta Medical Society, Greenwood, Miss., Oct. 27, 1924.

in an alkaline medium," and to avoid this he recommends sour milk, on the theory that the lactic acid would inhibit the growth of old age producing bacteria—thus the expression "butter milk is the antidote to old age." He attributes the longevity of the people of Bulgaria to the use of "Yoghurt," sour milk, produced by the action of the Bulgarian bacillus. I might say, in passing, that the doctor, himself died at the age of 72, using his own remedy.

If old age is a disease, then is it a vascular disease primarily, or is it a glandular disease, or is it a toxemia of bacterial origin?

In the International List of Diseases causing death, Old Age is not given, but is listed as an undesirable and indefinite term, and not acceptable. Yet Senility, or Old Age, is given as the cause of death, in the majority of deaths after 70. The cause of death should have been stated as "Unknown."

Dr. Nascher of New York, says "Old age is not a disease, but a physiologic entity like childhood."

Dr. Thewlis's book on Geriatrics is based entirely on this principle, that it is "a physiologic entity and not a pathologic state of maturity."

Then we conclude that old age is not a disease, but a normal condition occurring in every form of animal and vegetable life, which cannot be prevented, but may be deferred, if we will.

In the human body, which is a wonderful machine, made in duplicate, on account of the "wear and tear and depreciation and other factors to be considered later, certain anatomic and physiologic changes occur in every organ and tissue of the body, called senile degenerations. The main change is a waste of tissue which is never restored, or if it is, it is replaced by one of a lower order, fibrous instead of cellular. Brain and nervous tissue are not regenerated. Inactive muscles undergo fatty degeneration, and atrophy. All the arteries undergo atheromatous and calcareous degeneration. In bony structure, the organic matter wastes away, leaving an excess of mineral matter, the bones become more brittle and lighter. All the organs atrophy, and their functions are impaired, except the prostate, which hypertrophies, and the heart, which nearly always hypertrophies, sometimes however undergoing brown atrophy.

The circulation is maintained with difficulty, due to the hardened arteries. The

failure of the heart to properly pump the blood to all parts of the body, lessens the nutrition, thus supplied.

With advancing age the mental faculties are weakened, memory being the first to suffer. The ductless glands take part in this degeneration but not simultaneously. The thymus completes its growth at the third year, the pineal shows its chief activity during childhood, and at puberty both glands atrophy. The gonads become active at this time, and the thyroid seems to take on new life. They continue active till the menopause in woman and about the age of 50 in man, when these glands with all others show signs of degeneration. Normally the ductless glands act in harmony, but if one degenerates more rapidly than the others, the balance is disarranged, and we have the various symptoms that arise from hypersecretion of one gland, and the hyposecretion of another. The manifestations of glandular deficiency then appear,—the falling hair, dropping teeth, dry wrinkled skin, low temperature, dimness of vision, diminution of perspiration, indigestion, obesity followed by emaciation, and reduced metabolism, arcus senilis, and tortuous temporals.

II. Old Age Diseases.—Old people have an acquired immunity to most diseases of the acute infectious type. However pneumonia and influenza are very fatal to the aged, and erysipelas is very common. The most common diseases are the degenerative diseases, in order of their frequency, Cancer, Cardio-vascular renal diseases, with the accompanying arterio-sclerosis and hypertension, Nervous diseases, as senile dementia, and the diseases of metabolism, gout, diabetes, and obesity. Properly speaking, arteriosclerosis and hypertension are not diseases but symptoms or effects. The symptoms generally attributed to arteriosclerosis are usually due to nephritis, senile arteriosclerosis producing no symptoms. When an old person dies we are apt to attribute his death to arteriosclerosis, which is no better term than senility, or old age, unless it is premature and due to syphilis, alcohol, the infections, or chronic intoxications of mid-life.

Benign hypertension nearly always means beginning chronic interstitial nephritis, and malignant hypertension means the same more advanced, with the secondary cardiac involvement, enlargement, and myocardial degeneration. Where the primary lesion is, has always been a de-

batable question. Charcot says it is nearly always the kidney, furnishing the peripheral resistance, then the hardened arteries, lacking elasticity, causing the heart to pump harder, and hypertrophying, increasing systolic pressure, the accentuation of the second aortic sound, finally dilatation, failing compensation, or an accidental hemorrhage, or uremia and death.

Rheumatism in the aged is nearly always not rheumatism, but pains due to nephritis or intestinal toxemia. Gout and diabetes are nearly always accompanied with, or associated with nephritis. All diseases in the aged run a very chronic course.

In the treatment of the aged, the patient should be treated more than the disease. As inactivity predisposes to toxemia, Exercise, getting the patient up out of bed, is of the utmost importance. It encourages them to fight, and the psychic element is all-important. "Encouragement, and showing the patient a great deal of attention, and taking time to talk to him about things that interest him have a better effect than medicine" is the opinion of Dr. Thewlis of New York.

III. Old Age—Deferred.—Old age then is inevitable, but it can be deferred, perhaps 10 to 20 years. The Life Extension Institute which was organized for the sole purpose of adding length to human life, and which has the endorsement of the leading life insurance companies, and the medical profession, has prepared a chart, which shows that life expectancy at birth is 55, the medium age in the U. S. today is 63, while the traditional, or Biblical span is three score and ten. Modern science, physical and mental, is slowly, but surely extending our span of life, having been increased in two centuries about 20 years. If you live to be 50, the chances are that you will live to be over 70. There are in the U. S. today 108 million people, but only 4 per cent of them are over 65. Only 19 persons in every 1000, born alive, reach the age of 90. There are 4267 centenarians in the U. S. today.

The Milbank Fund of \$9,000,000 is an endowment to experiment, with a view of adding a score of years to the average life. The American Public Health Association has dedicated itself to the same task. Dr. Geo. L. Meighan of Columbia University says "if a man reaches the age of 20 in sound health, there is no excuse, barring accidents, for not living to be 80."

The most prominent factor in longevity is

*heredity.* This has recently been clearly shown to be true by statistics gathered by Dr. Raymond Pearl of Johns Hopkins. Osler says "Longevity is a vascular question, and depends in the first place upon the quality of the vital rubber, we inherit, and secondly upon the wear and tear to which we subject it."

Obedience to God and His laws is of prime importance in the prolongation of life. God made us for a definite purpose, and I believe, with Dr. Lorand that "Each creature, man or animal, is destined to work; and if we follow God's laws and do good, human life will be prolonged and premature death prevented." Solomon says "My son, forget not my law; but let thine heart keep my commandments: For length of days and long life, and peace, shall they add to thee." (Prov. 3:1-2). Statistics show that the hardest workers in all lines of endeavor are the longest lived. "Work never hurts; it is worry that kills." How does worry kill? It is through the sub-conscious mind, which is the connecting link between the body and the mind. We all know that the "subconscious is amenable to control by suggestion, and is greatly influenced by emotion." Joyful emotions invigorate, and sorrowful emotions depress. Our bodies are made for "courage, confidence, and cheer, and not for fear, distrust, and gloom." Dr. Sadler tells of an ex-convict with a blood pressure of 190, who was constantly worrying over being re-arrested. On being assured on this point, his blood pressure began to drop, and in three hours it was 170, and the next day it was 150. We all know the effect of anger on blood pressure, in fact, sometimes causing sudden death, in the arterio-sclerotic individual, from the sudden rise. Crile states that "Emotion, energy, and excitement raise the blood pressure by causing a hypersecretion of the supra-renals, but if this stimulation persists there will be an ultimate tire and insufficiency of secretion, causing weakness and debility." Mind, then we see is a factor in longevity, that cannot be disputed. A fixed determination to live, the will, is the third link in the chain. When we lose courage and faith we grow old, and the old adage is true, "We are as old as we think we are." Chauncey Depew, who recently celebrated his 90th birthday, is still active in the business world as president of the Board of Directors of the N. Y. Central, and is at his office at 9 every morning. He says that "My grand father

died of worry, and my father died of worry, and I was dying of worry, when I decided to take up humor, to see the genial side of life. And I found that the mind controls the body." He attributes his long life to cultivating the spirit of optimism. "Pack up your troubles and smile, smile smile."

Soloman again says "A merry heart doeth good like a medicine, but a broken spirit drieth the bones."

The fourth factor in deferring old age is habit. Man is by nature a creature of habit. We should early form regular habits as to work, rest, and recreation. Natural death is doubtful. Seneca says "Man does not die, he kills himself." The ten life shortening habits as given by Dr. Lorand are Alcohol, Over-eating, Tobacco, Sexual Indiscretion, Uncleanliness, Ambition, Avarice, Anger, Vanity, and Avoidance of parenthood. The simple life is a long one, the strenuous, or complex life is a short one. Moderation in all things is said to be the key to health, and it is true that "Moderation and persistence travel life's road hand in hand."

Personal hygiene, as to fresh air, exercise, diet, daily baths, and bowel movement mean more than do drugs.

The Chicago Board of Health says "Modern life is too swift; therefore the essential things to do in prolongation of life is to cut down the speed." The Six Rules to Longevity as given by another Health Board are as follows: "Eat enough, but not too much. Play enough, but not too much. Sleep enough, but not too much. Work as hard as you please. Don't work when you should be sleeping, playing, or eating; and sixth, Don't worry." Dr. Fiske of the Life Extension Institute says "the problem of lengthening life involves the conquest of these factors: Heredity; Infection, acute and chronic; Poison, from within and without, as drugs, occupational, and endocrine disturbances; Food Deficiencies; Food excess; Air defects; Hormone Deficiency; Injury; Psychic trauma as fear, grief, and emotional excess, which is more destructive than mental effort; Lack of exercise; Psychic Apathy, as the lack of interest in life, giving up." He advises "as of first importance a complete physical examination at least once a year, to take, as it were, an inventory of physical assets, to find out if there are any defects and advise how best to correct them."

IV. Rejuvenation.—When we get old, can we be young again? The subject of re-

juvenation is always a popular subject. If old age is a disease due to degeneration of the thyroid, as advocated by Sir Victor Horsley, feed the aged thyroid and they will be young again. Or if due to the degeneration of all the ductless glands as stated by Dr. Arnold Lorand the hormones of all the glands would be indicated. If due to auto-intoxication by intestinal putrefaction as stated by Prof. Metschnikoff the treatment would be, *elimination*, and changing the intestinal flora, by drinking sour milk. There have been various methods advocated for rejuvenation, the physical, surgical, organotherapy, drugs, Ultra-violet ray, heliotherapy, X-ray, and Radium baths and mud baths.

Physical. Rejuvenation of those who are prematurely old due to disease or habit is possible, of course, and has been proven; but in the aged we can only hope to "Restore the *diseased organ or tissue* to the state normal in senility." Sanford Bennett, a retired business man of San Francisco, at the age of 50, broken in health, of tubercular and short lived parentage, claims that, by a system of exercises taken every morning flat of his back in bed, with the windows wide open, to have been completely rejuvenated, and at the age of 70, was a young man again in every respect. His recipe is "Moderate exercise of every muscle, alternate contraction and relaxation, in the open, with special attention to personal hygiene."

Surgical. Dr. Steinach's operations for rejuvenation have been given wide publicity by the lay press. The two methods used by him and his followers are, first, a simple ligation, under local anaesthesia, of the Vas Deferens, and the other, Transplantation in the old, of gonads, (the ovaries or testicles as the case may be) of young animals. Dr. William T. Belfield of Chicago in a recent issue of the Journal A. M. A. on "Some phases of Rejuvenation," says Dr. Steinach's method merits little attention, as it is founded on error, and refuted by experience."

Organotherapy was advocated first in rejuvenation by Brown-Sequard in 1889. He reported wonderful results upon himself and his patients from the injection of testicular secretion. Immediately, there sprang up factories all over the land, manufacturing Brown-Sequard's Elixir of Life? They worked day and night to supply the demand from many, many old men, ambitious to be young again. But alas! at Shamoken Pa., ten

deaths were reported following the treatment, and Rejuvenation received its "black eye." Dr. Thewlis says, Organotherapy in old age is a valuable weapon in combating diseased conditions, and preventing many senile degenerations," but in his book on Geriatrics, he does not mention the subject of rejuvenation.

Drugs. Arsenic has long had a reputation as a rejuvenator, as well as the Iodides, Iron, Phosphorus, and Strychnine, and others, but these drugs are only indicated in diseased conditions, not in normal senility.

Ultra-Violet Rays from the sun and the Quartz light, the X-ray, and Radium baths and mud baths all have their advocates as great rejuvenators. As old age, as stated, is a normal process of degeneration and atrophy of all organs and tissues, and glands, rejuvenation, except in disease causing premature senility, is against reason, against nature, and against God's plan of life. "No man putteth new wine in old bottles, the new wine would burst the bottles and the wine would be spilled. No man also seweth a piece of new cloth on an old garment?" It would seem secure at first, but the first use of the garment would make the rent worse. (Mark 2-21,22). There are many cases of extreme longevity, the most authentic, that of Thos. Parr, who lived 152 years. The account as given by the Philosophical Transactions of the Royal Society of London, of his death, and autopsy made by Dr. Harvey, is "He died after he had outlived nine princes, in the 10th year of the 10th of them, at the age of 152 years and 9 months "The immediate cause of death was attributed to the change of food and air and habits of life, as he was brought from Shropshire to London, where he was fed high and drunk plentifully of the best wines. Perfect condition of all organs and tissues was found at autopsy.

Then in conclusion our object should be, for ourselves and our patients, "To grow old gracefully" as expressed by Oliver Wendell Holmes, who was like Chauncey Depew, an optimist, and his whole life was lived, unselfishly, trying to make the world a better place in which to live.

Gladstone lived the simple life. He had the habit of walking a great deal after he was 70, and died in active life at 89. It was said of him that "He was the most colossal character on the globe." Dr. Abraham

Jacobi was in active practice past the age of 87. Dr. Stephen Smith died recently at 99. Dr. W. W. Keen completed his system of Surgery after he was 70.

When should we stop work and retire? "Only when unable to perform." Keep the body and mind occupied, and "remain in harness" till the end.

Some one has said that "The will to work is the will to live" and that,

"Life's battles do not always go  
To the older or younger man:  
But soon or late the man who wins  
Is the man who thinks he can."

Addenda and Explanation.—Life Extension Institute Plan as outlined by its founder, Harold A. Ley of Springfield, Mass., Dr Eugene Lyman Fisk as medical director, Prof. Irving Fisher of New Haven, chairman of the Hygiene reference board with such members as Surgeon-Generals Blue and Braisted retired, and Major-General M. W. Ireland of the Army, Rear-Admiral Stitt of the Navy, Dr. Goldwater of N. Y., Prof. Barker of Johns Hopkins, Dr. Haven Emerson of Columbia University, Prof. Mendel of Yale, Prof. Rosenau of Harvard and others of equal importance, —the plan—"We begin by making a complete and thorough survey of the entire body, and we follow this by periodical examinations. No member of our staff is permitted to give professional treatment to our clients, nor to recommend any one to us do. We find out what is wrong, and advise how best to correct it. You might call it a form of health insurance."

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THE MORE COMMON DERMATOSES  
DUE TO OCCUPATIONAL AND EX-  
TERNAL IRRITANTS.\*

M. T. VAN STUDDIFORD, M. D.

NEW ORLEANS.

The inflammations of the skin resulting from the action of a mechanical, physical or chemical cause are known as artificial dermatoses.

Each class is interesting and worthy of our study, but we must limit our discussion: first, to the dermatoses of external origin; and secondly, to those due to, or thought to be due to, chemical causes, thus omitting internal medicaments, auto-toxic substances and narrowing our discussion to external dermatoses called by Professor Darier, external toxidermas.

In this interesting group of toxidermas, one can only attempt to show their relation as to location and treatment. As for their etiology each has a different causative substance and as for skin reaction to this substance each differs as to quantity and concentration of the agent, as to resistance of the individual and as to the duration of the action of the agent. The resistance may be either regional or congenital.

The same injurious substance may give rise in different cases to fundamentally dissimilar skin eruptions, in just such a manner as individuals react differently to certain drugs and as the same individual reacts differently at different times.

With any local skin reaction of any extent we should expect to find symptoms of fever, general malaise, nervousness or headache, while they are important especially in treating the condition for the comfort of the individual, yet in this discussion they are to be omitted.

In making mention of the phenomena known as hypersensitiveness which may be active or passive, congenital or acquired, aided by some predisposing agent or aided by any group of them. In simple words, it means that lowered condition of resistance until the minimum dose of toxin is effective.

Being interested more in the name of the injurious agent, location of the eruption and the treatment of the condition, than a long discourse on the chemical nature of the injurious substances, I have omitted all

physical and chemical descriptions and formulas of these substances.

The dermatoses to be discussed will be those due to—The Rhus or oak family, the analin dye group namely, hair dyes, fur dyes, clothing and hat band dyes, match box or phosphorus sesquid sulfid poisoning only, mentioning the dermatose of barbers, candy and sugar workers, battery and electrical workers, druggists, petroleum and tar workers.

In Rhus dermatitis we have the Rhus toxicodendron, Rhus radicans and Rhus diversiloba, commonly called poison ivy, poison vine and poison oak, and since the introduction of Mah Jongg, the Rhus Vernix, a small tree native of Japan, but active in this country in its by-product, the Japanese Commercial lacquer.

Capt. John Smith, as early as 1609, records for us brief description of Rhus dermatitis when he describes the affection of his men soon after their entrance to this land. He describes "A poisonous weed in the shape of English Ivy which when touched causes redness, itching and lastly blisters, which pass away without further harm."

In China, Japanese lacquer dermatitis was described as early as 605 A. D. and in Japan, as early as 923 A. D.

The toxin substance is generally agreed upon to be a non-volatile polyvalent phenol, called by Toyama urushinol, and by English and American authorities, as lobinol or toxicodendrol.

We must distinguish Rhus Dermatitis from other eczematous eruptions, produced by irritants and from ordinary idiopathic eczema.

The clinical features of Rhus Dermatitis (Venenata) produced by the plants of the Rhus group are:

Symptoms developed in the course of a few hours to a week after contact with the poisonous substances, on exposed surfaces of body, usually face, neck, hands, genitals. It attacks the hand and face most frequently, most easily where the skin is thinnest, and where the surface is most accessible. By contact from here to the neck and genitals it is carried by the hands with a more extensive dissemination as the case may be.

The lesions consist of an erythema followed by sago grain or miliary papules and vesicles sometimes becoming confluent to form blebs or bullae, accompanied by redness, heat and edematous swelling, itching and burning sensations. Pustules may

\*Read before the Louisiana State Medical Society, Opelousas, April 22-24, 1924.



arise from infected vesicles or weeping from denuded surfaces.

Idiopathic eczema is usually distinguished by a detailed history, less rapid development and a tendency to become subacute or chronic.

It is agreed that the most common error in therapy is the frequency with which a succession of mercurials are used, each tending to spread the poison to other parts.

Toyama believes we should neutralize or destroy the poison with an alkali, weak nitric acid or sugar lead solution. His most trustworthy prescription is:

Caustic soda (potassium Hydrate) . . .	1.0 gm.
Alcohol . . . . .	30.0 c. c.
Glycerine . . . . .	10.0 c. c.
Water . . . . .	100.0 c. c.

This is rubbed over the affected area with a cotton pledget which neutralizes the toxin, and reveals it in its oxidized blackish state. The oxidized toxin is removed by a 1 per cent nitric acid in alcoholic solution on a cotton swab. The skin is then washed with soap and water and lead acetate 1 per cent solution applied.

In severe cases McNair used the Barthe de Sanforts (1914) paraffin treatment for burns. First applying a 5 per cent Ferric chlorid in 50 per cent Ethyl alcohol solution.

Ointments in any case are used only when the eczematous condition is encountered, being contra-indicated before the poisons are neutralized and removed, because they disseminate the poisons to other areas, causing them to become affected.

Frost, of California, has used as a specific treatment for the poison oak or *Rhus diversiloba*, an alcoholic solution of the toxin of the plant. This he standardized by injections into Guinea pigs. For adults, he gave from 0.5 c.c. to 1.5 c.c. of the alcoholic standardized product intragluteally, repeated once daily from 2 to 3 doses. In children, he gave the solution by mouth, using 10 drops in aromatic elixir as the initial dose, increasing one drop each dose, giving three doses daily until 20 were reached, then one teaspoonful daily.

As a preventive, Schamberg of Philadelphia, uses for those sensitized to the poison oak toxin, an alcoholic solution or Tr. of *Rhus Toxicodendron* as follows:

Tr. <i>Rhus Toxicodendron</i> . . . . .	1.0 c. c.
Rect. Spirits . . . . .	5.0 c. c.
Syr. Orange q. s. . . . .	100.0 c. c.

M. Take three times daily in one-half glass of water from one drop, increasing

each dose one drop, until 21 drops, then teaspoonful once daily through ivy season.

Locally, we might apply many other lotions or ointments, all highly recommended, but the above seems to meet good favor among authorities on *Rhus Dermatitis*.

Analin dyes—Besides the group of workers in manufacturing analin dyes and those using the dyes commercially in the textile mills, we have a class poisoned through the use of the dyes for cosmetic purposes, as in hair dyes, those poisoned by dyed furs and those of dyed clothing. When our lady wishes a more lasting dye than the vegetable dye, such as henna, she uses the analin hair dyes which she often carelessly applies or to which she is hypersensitive and skin reaction follows.

The patented hair dye might have as its base the salt of lead, mercury, bismuth or silver, usually it is phenylene diamine.

Sodium sulphite, pyrogallie acid or some oxidizing agent is used first and then the phenylene diamine is used, causing the hair to take on a light or dark color according to the length of application.

Individuals slightly sensitive to the dyes become so because of the process, which makes the skin pores more accessible and the failure properly to clean the dye off the skin after the application excites a dermatitis.

In each case the scalp or face is affected, the skin become erythematous with a feeling of intense burning, edema to the extent of closing both eyes, followed by a dermatitis, eczematous or exfoliative in character.

In dermatoses due to fur dyes, dyed clothing, dyed gloves or shoes, practically the same dyes are encountered, but the individual is usually hypersensitive to the analin group, while in hair dye dermatitis, the added oxidization and washing solutions furnish a factor for their production.

We also encounter a similar dermatitis in the beauty clays and bleaching lotions now in use.

W. Gilman Thompson, in the Medical Review for March 6, 1920, gives a very striking case history of Mrs. X, middle aged, vigorous, whose symptoms of poison lasted for more than two years. She was taken from England through France and lastly America, visiting noted practitioners in many places. She was treated for gout, weakened heart, fainting attacks and blurring of vision. One constant clinical symptom was a rash over face, neck, hands and occasionally other parts of body. Some-

times following vigorous physiotherapy, the dermatitis became universally distributed.

After two years of traveling from medical man to medical man, she came back to New York City, where Dr. Thompson, her family physician, was called and among the changes in his patient, he noted a change in the color of her hair. This led to a story of the use of the French Hair Dye which had precipitated the condition and which had maintained its acuteness. Prompt relief and recovery followed the withdrawal of the dye. The dye proved to be of the anilin base and gave all the symptoms of anilin poisoning, namely, vertigo, gastritis, diplopia, asthenia and exfoliative dermatitis.

The wise hair dresser today uses a test on eczematous or delicate skinned individuals. This consists of applying minute amount of the dye and washing solutions either on the temple or back of the ear and collodion dressing is applied over this for at least 12 hours.

Hy. C. Semon, in *British Medical Journal* for March 1923, gives us a brief resume on Dyed Fur Dermatitis when he says, "patients enter with etiology on their shoulders." The eruption is limited to shoulders, neck and chin. In prolonged cases lips and eyelids are also involved. The blotchy erythema is limited at first to exposed surfaces, spreading, resulting in considerable edema and disfigurement. The latter cases show pronounced infiltration, tending to vesiculation and weeping with itching and burning.

Differential diagnosis is with seborrhea dermatitis. Location: absence of involvement of scalp, backs of ears, wings of nose, and between shoulder blades, with history of acute outbreak usually clears up the diagnosis.

Barbers often develop an anilin dye dermatitis of the exfoliative type due to constant irritation of the hands by soaps and lotions and constant application of the dyes.

In match box dermatitis we are dealing with phosphorus sesquid sulfid as the poisonous agent. The matches or match box carried practically in contact with the tender skin surface, aided by irritation and warm weather, an erythematous papular eczema is produced. As one area becomes sore the matches are moved to another pocket with the same results.

I remember seeing a case where a lesion on each thigh and one under his shirt

pocket marked the carrying places of the match box.

We must omit the dermatoses due to tar, petroleum, Bakers dermatitis etc., for want of space and time.

Summing up—We have to deal with individuals hypersensitive, either actively or passively, having a regional or congenital resistance, which may be affected by the concentration of several agents, predisposing the region to attack by a minimum dose. We have those who have previously been affected who are made more sensitive and react to very slight irritation.

A full history is invaluable in the group of dermatoses found on the exposed surfaces and with it one is often able to connect the outbreak of the eruption with the exposure to the toxic substance. In every instance, the treatment consists in removal of individual from exposure, neutralization and removal of the poisonous agent from the affected area.

In Rhus dermatitis this is done by application of alkalies—removal of oxidized toxin with 5 per cent nitric acid in ethyl alcohol solution.

Benzene, alcohol or cotton oil are fine removing or cleansing applications. Soothing lotions such as calimine zinc oxide lotion. Wet packs of 2-3 per cent borax or soda carbonate or ammonium muriate 1-3 grains to ounce.

As the acute erythema subsides ointments may be used in combatting the eczematous conditions such as 5 per cent corn starch and zinc oxide in white vaseline.

In treatment, keep in mind the fallacy of changing from one to another application, either spreading your toxin with each charge or not giving any of them sufficient time to be of use. Allow a good remedy time for results.

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#### DISCUSSION

Dr. Henry Menage (New Orleans): If the title of the paper were to be discussed from all angles one could almost write a text-book. I do not propose to discuss the paper fully.

We dermatologists make a diagnosis of skin dis-

ease by devious routes, and we sometimes have to use the system of a Sherlock Holmes to arrive at a conclusion. Among the diseases that require that type of investigation are the occupational and external irritating diseases of the skin. What I want to emphasize is that in making a diagnosis of disease of the skin on exposed parts of the body we should get the history of the case, and among the facts to be brought out is the occupation of the individual. Occupation plays a big part in the etiology of diseases of the skin of all parts of the body.

DYSPHONIA, AS EXPRESSING DISEASE REMOTE FROM THE LARYNX.\*

HOMER DUPUY, M. D.  
NEW ORLEANS.

It is through dysphonia, hoarseness, that the larynx usually first tells the story of disease within its own borders. But it also not infrequently gives this same signal of distress in diseased conditions remote from its own structure. We purpose to limit our discussion only to chronic dysphonia associated with (1) Gumma of right lung. (2) Thyroid gland enlargement. (3) Aneurism of the aortic arch. The laryngeal involvement in these affections is not the result of any inflammatory changes within the larynx. The laryngoscope shows neither hyperemia, nor infiltration of these parts, it reveals some form of vocal cord paralysis. This lack of proper physiological vocal cord movement is caused by a disturbance in the neuro-muscular apparatus. It is brought about by pressure on the Recurrent Nerve, the chief motor supply nerve to the larynx. The left Recurrent is the longer nerve, originating from the left Pneumogastric just in front of the arch of the aorta. Owing to its length it is more frequently subjected to pressure. The Right Recurrent is given off from the right Pneumogastric at a point behind the right subclavian vessels. It is, therefore, a shorter nerve, and clinically it is extremely rare to find it isolatedly subjected to pressure. The following case report illustrates a right nerve involvement.

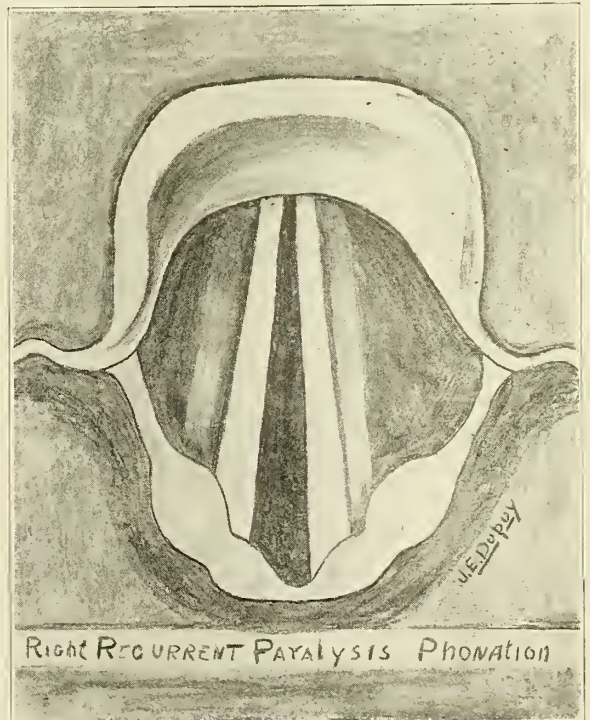
Case 1. White male, aged 40, presented marked hoarseness, intense coughing and loss of weight. Sputum negative for tuberculosis. No increased temperature. Despite the hoarseness, no laryngoscopic examination was instituted.

The patient went to the piney woods to recover from a supposed tubercular infection. He returned unimproved, and was for the first time

referred to Dr. Joseph Danna at the Hotel Dieu. I was called in as consultant. The laryngoscope showed right vocal cord completely paralyzed. The larynx was otherwise normal. (picture 1). This meant pressure on right Recurrent Nerve. As nothing in the neck seemed to account for the pressure, we suspected a growth in right lung involving the apex, near which point the right Recurrent begins its upward course to the larynx. The patient could not be moved for an X-ray. A Wassermann gave positive findings. We had just begun antiluetic treatment when he began coughing up large quantities of pus. With this outpouring of pus the fatal end came quickly. Dr. Maurice Couret held a partial autopsy. An enormous broken down gumma had involved the right lung and had perforated the lower trachea.

Remarks: A more complete examination at the beginning of the patient's illness, including laryngoscopic aid to explain the hoarseness, would have saved a life. The laryngeal picture alone would have pointed to a pressure phenomenon. The rest could have been worked out. Moral: Only a laryngeal examination can give the right clue when searching for the cause of hoarseness.

Case 2. White female, aged 35. Came to the Throat Clinic, Charity Hospital, complaining of hoarseness. She presented a large adenomatous goitre. The left lobe was decidedly larger. Laryngoscope revealed paralysis of left vocal cord. The left enlarged thyroid lobe was evidently pressing on the Recurrent of that side. We advised her to seek operation at once so as to remove pressure on the nerve and thus help restore its function. Remarks: Both Recurrents in the region of the thyroid gland lie between the trachea and the oesophagus, but it is of practical importance to know that left Recurrent nerve is more superficial, not so deeply imbedded between the trachea and oesophagus. It is, therefore, anatomically more exposed to pressure in this situation. Thus,



RIGHT RECURRENT PARALYSIS PHONATION

\*Read before the Louisiana State Medical Society, Opelousas, April 22-24, 1924.

it is that the left Recurrent is more frequently implicated in thyroid enlargement. The recognition of such a paralysis has a practical bearing in restoring vocal function. Even in the absence of other urgent symptoms, if we would forestall atrophy of the laryngeal muscles we must quickly relieve pressure and restore innervation by a thyroidectomy. In the routine examination of patients with thyroid disease the practical use of the laryngoscope must be recognized.

#### DISCUSSION

Dr. G. Farrar Patton (New Orleans): During the first ten years of my practice I had a patient who was joint proprietor of a large foundry and machine shop. His business took him to places like the Yazoo delta and over into Arkansas, where he contracted malaria, and I was called to treat him for what appeared to be a severe case of occipital neuralgia. I did not succeed in relieving him, and he decided to go to Hot Springs, Ark., where he consulted a high-priced physician, took the baths, drank the waters and otherwise went through routine treatment, with but little, or no benefit. He then made a trip to England, and in London paid a three guinea fee to a leading nerve specialist, who, likewise, failed to relieve him. After his return home I was called one evening to prescribe for some slight ailment of one of his children and in talking to his wife about his case, was told by her that while rubbing his

neck with St. Jacob's oil, she had noticed a swelling which beat just like his heart. Well, the secret was then out, and to use a familiar expression, "You could have knocked me down with a feather." That man had a well defined right subclavian aneurysm which any one of the doctors consulted ought to have discovered, and it had remained for his wife to find it and call attention to it. Under the administration of full doses of K. I. some relief was obtained, and the patient lived several years, during which, with the continued pressure exerted on the recurrent laryngeal nerve, his voice became husky and toward the end was almost entirely lost.

I wrote a paper on that case, emphasizing my conviction that the progress of medical science depends, not alone on recording our little triumphs, but upon a full and honest confession of our shortcomings as well. That lesson has been valuable to me as showing the need of making a thorough and exhaustive examination in every case, rather than trust to superficial indications which, as in this instance, may prove absolutely misleading.

Dr. Oscar Dowling (New Orleans): I have enjoyed the paper. I might say that I was associated with Dr. Dupuy at one time in his professional career at the Ear, Nose and Throat Hospital, and his advancement in that line of work has been very gratifying to me.

I think we should all be impressed with the importance of thorough examination of the individual. I was in a southern parish in the office of a doctor there and saw him make a most thorough examination of the lungs and throat of a patient. When he had finished the patient asked what he owed, and the doctor said: "I will have to charge you three dollars, because I have taken a great deal of time for your examination." The patient handed him five dollars and said, "If you are willing to accept this bill in payment for your services I will be glad to pay it, for the reason that this is the first time I have had an examination that was satisfactory to me." I mention that to show you that people are willing to pay for services when they get them, and the doctors in the rural districts should keep up with what is new in medicine by going to post graduate schools. Some time ago a man consulted a dermatologist in New Orleans and they discovered that he had a distinct lesion of leprosy. This man had been examined by qualified physicians, but they did not undress him. That brings out the importance of what Doctor Patton mentioned—thorough examination of all patients.

Dr. Paul Michinard (New Orleans): It is hard for a gynecologist to speak on laryngeal troubles, but Doctor Dupuy mentioned something about mistakes having been made. I did not hear him mention some measure that might be adopted to avoid falling into such errors.

I had two patients with cough suggestive of some trouble in the recurrent laryngeal nerve, both men. I auscultated, and I think I have a pretty well trained ear, but I failed to hear a bruit. After that, being in doubt, I had four friends examine one of these men, but not one of us could find the characteristic bruit of an aneurysm. Neither was there the characteristic difference in the pulsation of the radical arteries, nor a difference in the blood pressure on either side. We thought we were wrong, and thought this man had incipient tuberculosis in addition to something pressing on the recurrent laryngeal nerve, so we had Doctor Granger's assistant make a



LEFT RECURRENT PARALYSIS INSPIRATION.

fluoroscopic examination, and there was seen a pulsating aneurysm of the aorta. That man died of rupture of the aneurysm two weeks later.

Then I had another case. I did not take any chances on my ear, but had a fluoroscopic examination made, and there was an aneurysm which could be seen pulsating. Both of these cases were luetic. Now, when any person comes to me with any cardiac or pulmonary trouble I do not depend upon the ear, but send him for fluoroscopy and X-Ray. I have been reading up on aneurysms and I find that it is probable that in a large percentage of cases of aneurysm of the aorta the bruit cannot be heard, but the pulsation can be seen with the fluoroscope.

Dr. L. L. Cazenavette (New Orleans): The subject has been so well covered by Doctor Dupuy that there is really little to add. I rise, however, because the paper and the discussion have brought out the point of the involvement of the nerves of the larynx as coming from the recurrent laryngeal. From the standpoint of neurology we find that hoarseness is at times related to other conditions of the nervous system; diseases that affect the more central part of the nervous system. I have reference to cases of bulbar paralysis. Of course, under those circumstances, we have many other symptoms that might guide us in the diagnosis and location of the disease. But I see no reason why the laryngoscope should not prove its great usefulness in such cases.

Dr. Homer Dupuy (closing): Dr. Michinard is right. Pressure from aortic aneurysm may cause persistent coughing, but if pressure is sufficient to cause the coughing dysphonia will also be present, for this pressure will also involve the Recurrent laryngeal nerve as it passes under and behind the arch of the aorta. Certainly we can trust the laryngoscope for accurate information when hoarseness is present. It will almost unerringly tell us about those troubles having their origin within the larynx itself, and it may point to pathological changes in regions far removed from the larynx. Dr. Patton's report illustrates my contention, that dysphonia is not a disease, and as signal of trouble, it should be investigated by a proper and thorough laryngoscopic examination. Finally, I make a plea for the more frequent use of the laryngoscope in the study of disease.

of surgery held sway until Bardenheuer, Lucas-Champeoniere, and Lane noted that in a large proportion of cases deformity and loss of function resulted from an application of commonly accepted axioms of treatment.

Statistics of industrial insurance commissions confirmed these observations.

The modern methods aim at (1) a "sufficiently perfect restoration of the form of the bone to allow of perfect joint action, (2) and the preservation of the full vitality of the circulation and the neuromuscular apparatus." In order to obtain the above results, a knowledge of each method of treatment is necessary and at times a combination of the good points in each is essential.

In reviewing 200 cases taken from the records of the Surgical Clinic of Touro Infirmary, some interesting facts seem worthy to note: The end results are not what they should be in some cases. This may be attributed to (1) inadequate diagnosis and (2), inadequate treatment. Both of these factors can and should be eliminated. The first (inadequate diagnosis) is the result of the traditional use of a term, Colles fracture which is loosely applied and leads many who use it to expect that all fractures of the base of the radius must present the same clinical picture; the so-called silver fork deformity.

If we are to obtain better results, we must be more accurate in our terminology and be more exact in our examination.

One should not send patients for X-ray examinations before the physical examination has been made. If he does he will be disappointed because of the failure of the ray to show a fracture through an epiphyseal cartilage. Surgery should not be subservient to one of its hand-maids. Human reason must ever direct artificial or physical measures.

A properly taken history and a systematic examination, which consists of inspection, palpation, mensuration, followed by an X-ray examination should, in all instances, establish a diagnosis.

We might just as well eliminate the so-called sprains if we want to obtain good results in these injuries about the wrist.

Important conditions to be eliminated are, traumatic tenosynovitis, fractures of the carpal bones or dislocations of the carpals. In dislocation of one of the carpal bones, particularly the semilunar or scaphoid you will find a deformity on the dorsum of the wrist but there will be no

## FRACTURES OF THE BASE OF THE RADIUS: METHOD OF TREAT- MENT AND END RESULTS.\*

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NEW ORLEANS.

The recognition and treatment of fractures have engaged the attention of medical practitioners in all ages. The axioms formulated and used during the earlier days

\*Read before the Louisiana State Medical Society, Opelousas, April 22-24, 1924.

alteration of the relationship of the two styloids.

In fractures of one of the carpals, where no displacement exists, you will have deformity plus limitation of motions of dorsi and palmar flexion, but there will not be a localization of pain over the radius nor alteration of the relationship of the styloids—added to this pronation and supination of the forearm are not limited.

In fractures of the base of the radius one always finds localization of pain over the base of the radius and limitation of supination due to the defensive attitude of the pronator quadratus.

The absence of deformity does not mean that there is not a fracture present. Manipulation for the purpose of obtaining crepitus prior to the giving of an anesthetic is not indicated and should not be resorted to.

This brings us to our second conclusion that poor end results are due to inadequate treatment. A perfect functioning wrist is almost essential for the majority of occupations.

A perfect functioning wrist cannot be expected after a fracture of the radius without complete reduction. Complete reduction cannot be obtained in most instances without the relaxation obtained by anesthesia. Attempts without anesthesia are brutal.

The method of treatment which we have followed consists of (1) reduction; (2) immobilization; (3) and after care or attention to the soft tissues.

Proper reduction is the most important object in the treatment of fractures. If we make no attempt to obtain accurate approximation of fragments, the subsequent treatment will be valueless as far as perfect contour and good functional results are concerned.

The British commission after investigating 1736 cases concluded that "if the anatomical result be good, the functional result is good in 90.7 per cent; if the anatomical result be moderate or bad, the functional result is good in 29.7 per cent; if the anatomical result be bad, the functional is bad in 53.3 per cent. The fracture committee of the American Surgical Association, appointed in 1912, also concluded that "good anatomical restitution of a broken bone, results in better functional results than imperfect reconstruction and permits a shorter period of disability." All fractures should, therefore, be reduced under a general anesthetic (ether, nitrous oxide gas

with oxygen or ethylene gas) if there are no contra-indications. The anesthetic avoids pain, removes the psychic elements and overcomes muscular spasm, thereby making reduction a relatively easy matter. The patient's condition permitting, the reduction should be resorted to at the earliest possible time after the injury. The old axiom of waiting for the swelling to subside before an attempt is made at reduction should be discarded for we know that the callus-forming elements are most active immediately following the injury; also, because muscular contractures which in the beginning are only spasmodic later become real contractures which require greater force to overcome.

Reduction is accomplished by firmly seizing the forearm with one hand at the junction of its middle and lower third for counter traction; the wrist is grasped with the other hand; forcible dorsi-flexion of the hand breaks up the impaction; traction is made on the hand so as to disengage the fragments; the hand is then markedly flexed while downward pressure is made over the lower fragment; the hand is then brought to the horizontal position. This procedure will correct the posterior displacement, re-establish the normal relationship of the styloid processes and overcome the abducted position of the hand.

The forearm is covered with stockinette after which palmar and dorsal molded plaster of Paris splints are applied with the hand midway between pronation and supination. The plaster splint must be snugly molded to the base of the thenar eminence otherwise it will not give the desired result. The use of board splints in fractures of the radius should be discarded. Board splints do not immobilize the parts; if you exert sufficient pressure to hold the convex surface of the limb to the flat surface of the splint, a marked flattening of the limb will result. On the other hand the plaster of Paris splints are easily and quickly made, fit the limb snugly and exert uniform pressure, thus avoiding localized edema and trophic changes. For these reasons we have long relegated the board splint to the historic past.

After treatment: The patient is seen not later than twenty-four hours after reduction. At this time another roentgenogram is taken to determine whether the reduction is satisfactory. By resorting to Skinner's lines we can tell whether complete reduction has been obtained. If the

reduction is not complete another attempt is made to better the position of the fragments. After four or five days the splints are removed; the arm is given contrast baths (alternate hot and cold water); moderate superficial massage is given using either the hand or an electric vibrator. This is followed by passive motion of the fingers and wrist joint; the forearm is then baked and the splints reapplied. Passive motion should be performed only up to the point of pain; if we go beyond this the callus forming elements are stimulated thereby producing an exuberent callus which usually results in limitation of motion. This treatment is repeated every two or three days. After two weeks the dorsal splint is discarded. All dressings are removed at the end of three or four weeks. At this time the patient is instructed to use contrast baths twice daily; this is followed by resistive exercise, paying particular attention to palmar and dorsiflexion of the hand and pronation and supination of the forearm. This form of treatment is continued until the normal movements of the wrist joint have been restored.

End Results—Many bad anatomical results are finally followed by fairly good functional results. In most instances, bad functional results are due to incomplete reduction. However, in a few cases poor functional results are due to adhesions and circulatory disturbances, the result of prolonged immobilization. Clinically, we find a cold, smooth, shiny, skin devoid of elasticity, muscular atrophy, stiffness of the wrist joint and in a few cases, almost complete ankylosis; radiologically there is a marked atrophy of the carpal bones and the lower end of the radius and ulna. This is more prone to occur in people of advanced years than in younger subjects. In those cases in which deformity persists it is generally due to a failure of reduction. The deformity consists in posterior displacement with abduction and rotation of the lower fragment; the wrist is broader in its transverse diameter; the radius is shortened and the ulna styloid is more prominent.

“Early complete reduction, early superficial massage and early immobilization, will give a satisfactory functional result in the vast majority of fractures of the base of the radius.”

#### Summary:

1. Complete early reduction under a general anesthetic is essential.

2. Immobilization with plaster of Paris splints is superior to the board splints.
3. Early massage, contrast baths and immobilization are necessary adjuncts to prevent poor functional results.
4. Resistive exercises are essential for a speedy return of all motions of the wrist.

#### DISCUSSION

Dr. John T. O’Ferrall (New Orleans): I think Doctor La Croix’s paper is appropriate. The method of treatment of fractures is always appropriate. There is no class of case in the surgical treatment of disease more woefully neglected than the treatment of fractures.

Doctor LaCroix has laid great stress on complete reduction. Complete reduction is not only essential because of the functional results, but it gives relief from pain, which is probably the greatest consideration on the part of the patient at the time fracture occurs. If a fracture continues to give pain after attempted reduction it is absolute evidence that complete reduction has not been obtained.

I think the point of molded plaster splints is very excellent. The contour of the plaster much more accurately maintains alignment without pressure. We constantly see cases in which the surgeon seems to be under the impression that in order to retain reduction he must put his splints as tight as possible. The consequence is that a large number of cases of ischemic (?) paralysis result. In the hospital the common type is the flat wooden splint which produces marked flattening of the forearm and many times ischemic paralysis is the result. After the fracture is reduced it requires very little pressure to retain the reduction.

Early motion is very essential for the preservation of function of adjacent joints, and I think this should be active rather than passive motion. Doctor LaCroix qualified his remarks by saying it should be done only to the point of pain, which is correct. More damage is done by indiscriminate motion than anything I know of, but when this is carried out to the point of pain it is essential. If there is any doubt about carrying it to the point of pain, the motion should be active rather than passive.

The idea of putting a fracture in splints and leaving it there for four to six weeks is a fatal method. We all know that as soon as the fracture is reduced callus begins to form and the adhesive qualities of the callus are sufficiently strong in a week or ten days to hold the fracture, and in that case, therefore, we should begin motion in a short time, certainly not later than ten days, in order to accomplish the best results as far as active motion of the adjacent joint is concerned.

Dr. Edward S. Hatch (New Orleans): I do not think we can put too much emphasis on the treatment of fractures in the modern way. Reductions, the use of the plaster splint and early motion are the three things most important. Doctor LaCroix has gone into this in detail as to approved methods. I simply want to stress these three points.

Dr. W. P. Bradburn (New Orleans): I heartily agree with this paper, but would like to say a word as to anaesthesia. In the cities, where we have our nitrous oxide and ethylene, we can use it. The routine in our office has been for the past eight or nine years to use ethyl chloride for simple reduction in the office. The cone is placed over the face by the anesthetist and the patient is instructed to raise the opposite arm and hold it in that position as long as he can. It generally takes from three-quarters of a minute to a minute and a quarter before the arm falls and anesthetic is complete. The examination is then made and reduction accomplished. This allows two or three minutes of anaesthesia. To do that we have the plaster splint ready. After reduction the splint is applied. This splint is made to fit the arm and not the arm made to fit the splint, as you would have to do in case of the board splint. Some objection might be raised to ethyl chloride as a general anesthetic, but in our experience we have not had any trouble.

Dr. Isidore Cohn (New Orleans): There are a few things that strike us in the handling of these cases. We have been watching cases of fracture of the radius for a good while, and one of the things that strike us emphatically is inadequate diagnosis. We will overlook the question of treatment because once we know what is the matter with the patient everybody should follow the accepted line of treatment, which consists of anaesthesia, reduction, then immobilization, early passive motion, massage and heat. But the important point is the diagnosis. Given a dislocation of bone that will give you some deformity, diagnosis is extremely important. Nine out of ten cases of so-called sprain, if enough pictures are taken, will show fracture, and you will avoid the discomforting experience of having someone else show you several weeks after the patient did have a fracture.

In regard to anaesthesia, I do not like to differ with Doctor Bradburn, but I have an idea that ethyl chloride is a dangerous weapon. It does the damage soon. I am afraid of it. The object of anaesthesia is two-fold,—first to overcome the psychic side, and to produce muscular relaxation. With ethyl chloride the psychic side is overcome, but you do not get complete muscular relaxation. So I am afraid of it. Give them something that is safer and will produce relaxation. I believe ethylene is safer than ethyl chloride. If you do not have anaesthesia you have to use brute force, and that is not good. If you attempt to use it before the patient is asleep you still use more force than you should and traumatize the tissues. What you want is as smooth and perfect convalescence as possible.

Dr. Paul G. La Croix (closing): I want to thank the discussants. As to the anaesthetic, my idea is the same as Doctor Cohn's, and there is no use to repeat that.

We carry out the passive motion immediately after the first dressing is removed. The patient is also made to carry out the active motion, but we do not rely on that until all the dressings have been removed.

## REVIEW OF A SERIES OF HYSTERECTOMIES FROM THE RECORDS OF TOURO INFIRMARY.\*

C. JEFF MILLER, M. D.

NEW ORLEANS.

When it was suggested by the Chairman of the Scientific Committee that I discuss before the Touro Staff some phase of the work of the Department of Gynecology, it occurred to me that it might be of interest and value to review the hysterectomies performed in the institution over a period of years. For one thing, it has always been my conviction that these staff meetings should be utilized not only for the report of individual cases of interest and the discussion of abstract subjects, but also as a sort of clearing house wherein to take stock of our results and to estimate the profit and loss, so to speak, of our medical and surgical endeavor. Moreover, the technique of hysterectomy and the indications for its performance are as well standardized as those of any of the more common surgical procedures, which makes a critical estimate both possible and valuable.

It is the unanimous opinion of the best men of the day that in the past we have been entirely too radical in the number of hysterectomies performed for benign lesions of the uterus or conditions external to it. Also there is today a firm conviction that preservation of function is of the utmost importance. The indications for hysterectomy, therefore, while still flexible, are decidedly more rigid than was the case a quarter of a century ago, and I think it would be well to outline them briefly before proceeding to the body of my report.

Malignancy, formerly regarded as a definite indication, is becoming relatively unimportant. Operative treatment gives possibly 70 per cent of cures in carcinoma of the fundus and is therefore still advocated for this condition, but in the treatment of carcinoma of the cervix it has been almost entirely supplanted by radium and X-ray, which yield decidedly more satisfactory immediate and end results, as is proved by a large series of cases collected from various clinics. The place of hysterectomy in carcinoma of the ovary is not so well established. In early cases the removal of the

\*Read at a clinical meeting of the Touro Infirmary Staff, April 9, 1924.



uterus with the adnexa is probably of value, but in advanced cases, where implants have occurred or adjacent structures seem to be involved, simple removal of the ovaries should conclude the operation if anything at all is to be done. Again, the mere presence of fibroids is not an indication for hysterectomy. Radium, of course, is contra-indicated in the presence of infection or in growths larger than a three months pregnancy; otherwise it is a most valuable and effective therapeutic agent. Also myomectomy has a field of usefulness that certainly should be extended; large single or multiple growths can be removed by this procedure, leaving a perfectly serviceable organ and offering a prospect not only of continued menstruation but of possible pregnancy. Hysterectomy is indicated in metritis, endometritis and hyperplasia only when other measures have failed. Bleeding in itself is rarely, if ever, an indication, even when inflammatory disease contra-indicates radium or curettement, for often the mere removal of the affected appendages will effect a cure. Even resection of the ovary, by no means an ideal procedure in itself, is preferable to hysterectomy, for it is very often followed by happy results, and at any rate it averts the sudden menopausal picture with which we are all familiar. In simple cases a curettement, which removes the diseased endometrium, is frequently all that is required; moreover, examination of the scrapings will at once determine the underlying cause of the hemorrhage, which in many instances proves to be an unsuspected early abortion. In other cases a single dose of radium or graduated doses will be entirely successful. I can recall very few instances in my own practice in which I have been obliged to do hysterectomy following radiation for bleeding. Procidencia is a definite indication in women advanced in years, when the uterus is diseased in itself or when for various reasons the interposition operation cannot be done. Tuberculosis of the uterus demands hysterectomy, as does malformation with infection. The age of the patient is a prime consideration. After the menopause preservation of function need not be considered, before it the reverse is true, and the patient's age should certainly weigh heavily in the decision for or against hysterectomy.

To sum up, then, hysterectomy should be a last resort rather than a first choice; it should be done only when other forms of

treatment are contra-indicated. Conservatism should be the rule in all benign lesions, in inflammatory disease where the uterus itself is not involved, and in malignant disease of the cervix, where experience has shown that radiation gives more uniformly good results than the Wertheim technique, with its high mortality and questionable end results. Above all, the younger the woman the more conservative should be the procedure; it is not too much to say that the surgeon who removes the uterus of a woman under 40 should be very certain of his indications and well able to prove his case.

During the period 1921-1923, 224 hysterectomies were performed at Touro. The largest number performed by any one surgeon was 53, 23.7 per cent of the total number, the next highest 44, 19.8 per cent, and the third highest 40, 18 per cent. One surgeon did 22, two 10, one 9, one 7, two 4, seven 2, and seven 1 each. One hundred twenty-one of these hysterectomies, over half, were done for fibroids, and during the same period 42 myomectomies were done for the same condition. Of these the surgeon who did 40 hysterectomies, 24 of them for fibroids, did 26 myomectomies, 61.9 per cent of the total number. The surgeon who did 53 hysterectomies, 17 of them for fibroids, did 6, 23.7 per cent. Three surgeons did 2 each and 4 did 1 each. It is evident, therefore, since the hysterectomies outnumbered the myomectomies 3 to 1, that myomectomy is not a popular operation except in individual cases.

The ages ranged from 17 in 1 case to 70 in 1, the average age being 41.2 years, and the largest number in any one decade being between 40 and 50. One-hundred-one patients, 45.9 per cent, were below 40. Thirty-four of the patients were unmarried, and 32 of the married patients had never conceived.

The patients' complaints may be divided roughly into four classes, pain, menstrual irregularities, urinary disturbances and general symptoms. One-hundred-seven patients complained of pain, varying all the way from a mere sense of weight to intolerable discomfort, but acute pain in every instance was associated either with adnexal disease or acute appendicitis. Twenty-five patients with fibroids complained of dysmenorrhea since the known onset of the growth. One hundred thirteen complained of menstrual irregularities, either menorrhagia or metrorrhagia.

Twenty-two complained of bladder symptoms, chiefly frequency, though in one case there were periods of acute suppression due to pressure. Other complaints included leukorrhœa, prolapse, lacerations and pruritus. Thirty-five patients were aware of the presence of a growth.

Eight operations in the series were done for carcinoma of the cervix, 2, both by the same surgeon, for carcinoma of the fundus, 4 for carcinoma and 1 for sarcoma of the ovary, and in 1 case all the pelvic organs were removed for a general carcinomatosis with omental implants and an extension to the breast. Sixteen operations in all were done for malignancy of various sorts, a much smaller number, I am sure, than would have been the case during a similar period 10 years ago. Seven operations were done for a condition described as "precancerous" or "potential malignancy", with bleeding as the main symptom. In 7 cases the uterus was removed for tubal disease without uterine symptoms, and in 3 it was removed because of ovarian disease. Thirty-three hysterectomies were done for simple bleeding uncomplicated by adnexal disease, and 13 were done for bleeding complicated by this condition. Sixty-four operations were done for fibroids associated with tubal disease, and 57 for uncomplicated fibroids. Fourteen were done for procidentia, in 5 instances associated with fibroids and in 1 with malignancy. Two were done for bicornate uterus, 1 for atresia of the vagina with a history of long-standing infection, 1 for tuberculosis, 1 for chorio-epithelioma following hydatid mole, and 2 for pyometra. One was done because the uterus was so imbedded in adhesions that in their release the entire peritoneal surface was stripped and the organ materially damaged.

Supravaginal amputation was done in 128 cases, in 3 instances, all by the same operator, trachelorrhaphy being done also. Complete hysterectomy was done in 33 cases, in 3 of these, all by the same operator, the cervix being loosed from below before the abdomen was entered. Vaginal hysterectomy was done in 34 cases, in 1 instance the cervix being left in situ. One Wertheim hysterectomy was done for malignancy. In 15 cases, all by the same surgeon, Schroeder amputation of the cervix was done prior to supravaginal amputation. In 7 cases the operation was described simply as hysterectomy and it was not possible to determine what technique was employed.

Bilateral removal of the tubes and ovaries was done in 52 cases and unilateral removal in 27; bilateral removal of the tubes was done in 29 cases and unilateral removal in 8; bilateral removal of the ovaries was done in 2 cases and unilateral removal in 15, making 133 cases in which partial or total removal of the appendages was done. In 17 of these cases, however, exactly what was removed is doubtful, as the loose use of the term pan-hysterectomy to include removal not only of the uterus but also of the appendages or some portion thereof led to considerable confusion. Other operations included appendectomy in 66 cases, herniotomy in 4, gall bladder operations in 5, perineorrhaphy in 51, colporrhaphy in 3, partial colectomy in 1, D. and C. in 7, cauterization in 4, and repair of a fistula in 1.

The average time of operation was 1 hour and 10 minutes. The lowest individual time was 42 minutes, based on 40 cases, and the highest 2 hours and 25 minutes, based on 2 cases. The stay days, excluding deaths, averaged 18, the lowest individual average being 11 for 4 cases and the highest 40 for 9.

The total complications amounted to 17.1 per cent, and included stitch abscesses, pelvic abscess, rupture of the wound, cystitis, colonic infection, acute dilatation of the stomach, acute suppression of urine followed by a vesico-vaginal fistula, cellulitis of the cervical stump, measles, typhoid, bronchitis, dysentery, edema of the vulva, psycho-neurosis, parotitis and shock. There was a mortality of 11 or 5 per cent. In 3 cases death was due to acute dilatation of the stomach, in 1 to shock, in 2 to peritonitis, in 2 to pneumonia, in 1 to acute nephritis, in 1 to a colon bacillus infection, and in 1 to a fat embolus.

In conclusion, there are several general points which I think might well be stressed. The question of inadequate histories has figured in this, as in every other statistical investigation which I have ever attempted, and the remedy, it seems to me, lies in a closer co-operation between the visiting and the interne staff. I can illustrate this by calling to your attention one of the most flagrant omissions noted in this particular group of histories; the interne is not permitted to make pelvic examinations on private patients, the visiting man fails to enter his findings on the history or to dictate them in the operating room, and the history is finally filed minus this important point. In addition, in many instances the opera-

tive record does not contain the indications for the procedure selected, an omission which a prejudiced investigator might be inclined to construe rather harshly, while in other instances there is no description of the operative findings. A critical estimate is necessarily difficult in the face of such omissions. Again, there is no uniformity in the descriptions of growths or organs, and contradictions and inconsistencies are frequent. A fibroid is the size of a lemon in one portion of the history and of a cocoon in another. The interne's notes may describe the patient's menstrual history as regular and normal, while the surgeon's operative notes state that the uterus was removed for bleeding. I could of course multiply such instances for you.

Another grave need is a standardized nomenclature for operations such as is in use for diseases. In these particular records half a dozen terms were used to describe the removal of the uterus, while the term hysterectomy or pan-hysterectomy was used in literally dozens of instances to include also the complete or partial removal of the adnexa. There is absolutely no justification for this usage in etymology, and none which I am aware of in surgery. You will note that in nearly all of these instances the blame belongs to us and not to the interne staff; we are at fault when we O. K. incomplete and inaccurate histories, and certainly we alone are at fault when the operative notes are lacking in any detail.

There is another suggestion I should like to offer about our system of filing. The unit system of admission is, as you know, employed in many hospitals; that is, each time the same patient is re-admitted he is given the same history number and in this way a perfect follow-up is possible, at least in the hospital. With our present system at Touro this is impossible, and therefore I cannot give you, as I had hoped, the relative figures for the use of radium in diseases of the uterus. To illustrate, over a certain period of time one surgeon has 49 radium histories filed under fibroids, and another 35. But in the first instance each history represents a different patient, in the second, each history represents a single application, possibly the third or fourth, to a patient represented elsewhere in the series by another application. As each history is filed under a separate number it is manifestly impossible, without the expenditure of time and labor which the results would hardly justify, to check them up and reduce

the figures to the same basis. It would be well if we could devise some method of filing the histories or admitting the patients which would make such information readily available.

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## THE ROENTGEN RAY TREATMENT OF DISEASED TONSILS AND ADENOIDS.\*

HAROLD G. F. EDWARDS, M. D.  
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The treatment of diseased tonsils and adenoids is still one of the most discussed questions in medicine, and there is a growing realization that tonsillectomy is unsatisfactory and inadequate as a remedy for a large proportion of the local and general ills for which it is undertaken. As early as 1920, French, in a paper before the American Laryngological Association, pointed out the inadequacy of tonsillectomy in many cases of the so-called "tonsillar infections", because the lingual branches of the lymphoid tissue retained pus and bacteria, and because a safe and efficient method of disposing of these lingual branches has not yet been devised. Very recently, Denman has unhesitatingly stated that "tonsillectomy has to a large degree been weighed in the balance and found wanting, and that it is destined to be superceded in many cases by some superior method."

### *The Value of the Tonsil*

One of the points on which the advisability of surgical removal of an organ as opposed to medical treatment rests is, of course the value of that organ to the individual. Appendectomy has been generally accepted because it is agreed that the function of this organ is negligible. Certain advocates of tonsillectomy class the tonsil with the appendix, and claim that the harm which it may do entirely outweighs any value which it may have to the individual. Colonel Bushnell, however, because of "the immunizing dose of tubercle infection sustained in childhood by the repeated ingestion and inspiration of tubercle bacilli", believes that the tonsils may be "a locus thru which the circulating tissue of the infant derives its immunologic defense against pathogenic bacteria". Fishberg considers that the presence of the tonsil, even in the adult, is a valuable factor in

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\*Read before the Louisiana State Medical Society, Opelousas, April 22-24, 1924.

recovery from pulmonary tuberculosis. Those of us who are in accord with the teachings of these men will indeed welcome a method other than tonsillectomy.

#### *Review of the Literature*

As early as 1913, Nogier and Regaud reported encouraging results from the X-ray treatment of diseased tonsils and adenoids. It was not until 1919, however, when Witherbee of the Rockefeller Institute for Medical Research announced his plan of treatment and the results, that the method came to the front.

Hickey, and later Kahn, reported encouraging results following the treatment of diphtheria carriers by means of the Roentgen-ray. Ullman and Lane, working independently, reported the disappearance of hemolytic streptococci following the irradiation of the tonsils. Wells, in discussing the treatment of tonsils by irradiation, emphasizes the importance of "the penetrating effect of the rays which treat the throat as well as the tonsil. The adenoid, infratonsillar nodule, the lingual tonsil and the chain of lymphatics which extend well up the lateral walls of the throat to the eustachian tube all receive irradiation. These tissues are all more or less diseased and exhibit markedly hypertrophied and infected crypts. The clearing of this area is important and leads to success in relieving symptoms which we hope to cure, as much as the treatment of the tonsil".

#### *Roentgen-ray Treatment*

*Selective action of the rays.*—The selective action of the Roentgen-rays on the tonsillar tissue is no longer questioned, and is explained by the fact that the structural characteristics which determine susceptibility to irradiation are of a cellular nature: undifferentiated cells, hyperchromatic nuclei, vascularity, especially when due to an abundance of delicate capillaries, and absence of much intercellular substance. Satenstein and Remer make the following statement: "Acute and subacute inflammatory tissues are characterized by lymphocytes,—round cells. These are the least resistant of all pathological cells and are most readily influenced by the application of the Roentgen-rays.

Atrophy of the tonsil is due to the absorption of the immature lymphatic cells in the follicles, lessening the depth and distortion of the crypts and at the same time causing an eversion and evacuation of contents. The destruction of the lymphoid cells is associated with endarteritis obliterans and,

finally, formation of the dense connective tissue.

*Types of tonsils.*—Tonsils may be classified into three general types: (1) the lymphoid type of childhood in which the lymphoid tissue predominates in the formation of the tonsil structure; (2) the fibrous type found in adults, in which the fibrous tissue predominates, only a small amount of lymphoid tissue remaining, and in which the crypts are shallow and free from pus; and (3) the fibrous type just described, but with large, deep and definitely infected crypts.

In tonsils of types (1) and (2), Roentgen-ray treatment, is the method of choice. In type (3), with large, deep and infected crypts, tonsillectomy, followed by Roentgen-treatment, is the method which will give the best results. For reasons which are obvious, the statements regarding the tonsils are equally applicable to adenoids.

*Indications for treatment.*—Roentgen-ray treatment is especially indicated in cases of hypertrophy with vegetation in the rhino-pharynx, and in cases complicated by hemophilia, cardiovascular conditions, Bright's disease, chlorosis, or tuberculosis. With surgical treatment, there is the danger always attendant on the taking of a general anaesthetic, and if the operation is performed under a local anaesthetic, one cannot be sure that the patient will be free from pain and anxiety. Moreover, alarming hemorrhage may occur. Sequela, such as septic emboli, lung abscess, empyema, phlebitis, endocarditis, middle ear and mastoid, may retard recovery. Furthermore, the results of surgery are often unsatisfactory because hypertrophy can recur, and excessive lymphoid tissue still remains in the rhino-pharynx.

Following Roentgen-ray treatment, there are no known complications, provided the technic is properly carried out. Dryness of the throat and occasional swelling of the parotid and submaxillary glands have been the only disagreeable after-effects, and these usually subside in a few hours. In a series of more than 70 cases, of all types, which I have observed from 1 to 3 years, in which the patients suffered from recurrent attacks of tonsillitis and pharyngitis, more than 80 per cent have been relieved by Roentgen-ray treatment. Good results were also obtained in cases of recurrent pharyngitis, following removal of the tonsils and adenoids. As a result of Roentgen-ray treatment, the size of the tonsil is reduced, and the irregular, nodulated, ragged, or

spongy tonsil becomes smooth, firm and pale, as when normal physiological atrophy takes place.

*Technic.*—The patient lies on his back on the treatment table, with an angle block under his shoulder and his head turned to one side, in the same position as for radiographing the upper molars. An area of 2.5 or 3 inches square, the center of which is just below the angle of the jaw, is irradiated. This area may conveniently be mapped out with foil or leaded rubber. At present I am using the following formula: 120 K. V., 5Ma., F.S.D.30cm., 4mm. Al, time 10 minutes over each tonsil in adults, and 8 minutes in children. Two or three irradiations, as the case requires, are administered at six week intervals. Several patients were given ten minute exposures at 200 K. V., 5Ma., F.S.D., 50cm., 1mm. Cu, plus 1mm. Al., but I have not found this method superior, and shall therefore continue the original technic.

### Conclusions

The surgical treatment of diseased tonsils and adenoids has not proved altogether satisfactory. Moreover, the tonsil has a function which great care should be taken to preserve. It is reasonably certain that with sufficient time and correct dosage, repeated if necessary, atrophy of the tonsil, similar to the normal physiological retrogression, can be obtained, and all evidence of disease removed. The results of Roentgen-ray treatment have been very satisfactory, and the literature on the subject is evidence of its efficacy.

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### DISCUSSION

Dr. S. C. Barrow (Shreveport): I read Doctor Edwards' paper last night and have listened again to its reading this morning, and wish to endorse heartily everything he has said, with the possible exception of his technique, but that does not interest you. The question that interests you is the X-Ray treatment of tonsils and adenoids. Since 1922 we have treated something over 220 cases, and in every case, with the exception of five, the treatment has been satisfactory to me and to the patient—satisfactory to the extent of having given the patient relief from the clinical symptoms, some of these patients having had rheumatism and heart trouble.

This is the same old story that has been

repeated since 1895, when the X-Ray was first used. There has been a fight and scrap, but ultimately the X-Ray has found its place, which it will do in the treatment of the tonsils.

It is useless to talk to you about the disadvantages of surgical treatment. We do not fight on surgical treatment in some cases. We are trying to get co-operation, and I am glad to say we are doing it. You hear lots of talk about the bad effects of the X-Ray, of its bad effect on the thyroid, how it burns the skin, and you even hear that it produces sterility when used in treating females. Of course, it can and will do all these things, and the fact that it can and does emphasizes the fact that the men not versed in the use of the X-Ray should not attempt those cases.

We have been criticized for treating too many and all types of tonsils. We deserve that criticism in a way, but it was done in an effort to find out which cases are suitable, and we are now eliminating from our work those cases which we believe are surgical cases. I wish it were possible for us to lay aside our prejudices in our work. I wish it were possible for me to treat tonsils in harmony with the laryngologist and others. We are treating them in harmony with the general practitioner. Out of the cases we have treated, twelve had been extirpated surgically with no relief. If I had a child that needed tonsil treatment it would get tonsil treatment in my own office with the X-Ray.

Dr. Homer Dupuy (New Orleans): The omnivorous X-Ray has now invaded the tonsil region. We are treading on delicate ground and we must approach the question of tonsils and X-Ray in a spirit of reverence for truth and free from vain-gloriousness. The history of medicine repeats the old story of drawing sweeping conclusions from insufficient material. The X-Ray may establish a place for itself in removing tonsils in some special group of cases, in which contraindications may exist as to anesthetics local and general. One thing certain, unless the X-Ray can destroy the lymphoid tissue, which is the essential element, of the tonsil, no good result can follow. Our tonsillectomies sometimes fail us, because, in spite of whatever method or technic is applied, lymphoid cells may remain in and around the tonsil fossa. In a very small percentage of operated cases these remaining lymphoid cells may lead to recurrence of tonsil tissue. And this seems well nigh unavoidable. Several years usually elapse before the recurrence is detected. Not sufficient time has elapsed to judge the end-results of these X-Ray applications. Will the X-Raying be followed by a recurrence of this lymphoid tissue? Their limited experience does not justify the over-enthusiasm of Drs. Barrow and Edwards.

Dr. A. U. Desjardines (Rochester, Minnesota): I would like to say a few words on this problem because it is extremely important. I agree with Doctor Barrow and Doctor Edwards about certain phases, and I think Doctor Dupuy has something to say on his side which must be listened to. It has been definitely proven experimentally over and over again that lymphoid tissue is one of the easiest types to influence with radiation, either radium or the X-Ray. Warthin has shown that better than anyone else. Russ, in London, has done the same thing in animals. If you expose only the ear of a rabbit to the rays for a sufficient length of time you can cause a drop in lymphocytes of 50 per cent in three

hours. Then regeneration will take place. In the human being we see the same thing. Last winter we treated a large number of patients, having the blood count taken at intervals of one to six hours so as to find the rate of regeneration. In three hours there is a marked drop of lymphocytes, an early polymorphonuclear leukocytosis, followed by leukopenia. The lymphocytes drop and after varying periods of time begin to regenerate. In certain structures like the tonsils and spleen the same thing happens, only not so rapidly. You can take an enlarged spleen and reduce it by radium or X-Ray to practically the normal point, and if you are careful in your judgment and your work and have had experience you can keep that spleen down for a long period of time, particularly in leukemia. The tonsil, being made up almost entirely of lymphoid tissue, should be and is, under certain conditions, very radiosensitive. I do not think radiation can be very effective in the old adult with a fibrous, cryptic tonsil, with buried foci, because there is not much lymphoid tissue left to work on. But in the young adult and child I would be tempted, at least in my own family, to try radiation first for a reasonable time, and if the result was not satisfactory, then I would have them thoroughly cleaned out.

We know that even in the best of hands aspiration pneumonia may follow tonsillectomy. Therefore, if there is any means of making a radical operation unnecessary it is worth trying.

Dr. Louis G. Stirling (Baton Rouge): I am not a nose and throat specialist. I am only a country doctor, but I have seen in so many instances disappointing results from tonsillectomy, sometimes very serious effects, that I have been looking for a long time for some means of avoiding the removal of so many tonsils, and if the application of the X-Ray or radium does not complicate the subsequent removal, I do not see any objection to at least giving it a trial. Another reason, I saw a promising young woman brought to the verge of death from pulmonary abscess following a simple tonsillectomy. So I think anything that offers relief from that danger is certainly worth trying.

Dr. Harold G. Edwards (closing): I want to express my appreciation to Doctors Barrow and Desjardines for their discussion; also to Doctor Dupuy for his very friendly discussion.

However, the point which I made was this, that it is conservatism in tonsil work that I wish to emphasize. If we want to get rid of the tonsils, let them take them out by the knife or some other method. Irradiation treatment does not destroy the function of the tonsil. We do not destroy all of the lymphoid tissue. I do not believe, as I said, that the large, ragged, and definitely infected tonsils are cases for irradiation.

Coming back to Doctor Dupuy's remark about tonsillar tissue remaining after operation, Lane collected statistics from 1,000 cases operated on at John's Hopkins Hospital, examined before operation and one to four years afterwards. Fifty-five per cent showed tonsillar tissue in the fossae; 40 per cent of the patients were just as liable to sore throats after the operation as before.

As you well know, the effect of irradiation on glandular tissue is little, and many of the bugaboos thrown out by the throat men about the destruction of the salivary and parotid glands has been overthrown by Orndoff, Ivy and others of Chicago, who say that the parotid and salivary glands are not affected. It is nauseating to me

to read reports from men like Babcock and Coakley who come out with the report from a few cases and tell about burns, baldness and even sterility. You do not irradiate the testicles or ovaries when you treat the tonsils.

In my series of cases, seven were treated following tonsillar operation. I have not made a close study of the statistics in regard to deaths following tonsillectomy. However, in the *Annals of Otolaryngology and Rhinology*, Loeb, sent out 5,000 inquiries and received 700 replies and death had been caused in 126 cases following tonsillectomy.

My honest belief is that irradiation treatment of diseased tonsils and adenoids in selected cases produces results, and also that for the throat men the handwriting is on the wall and that tonsillectomy in many cases is to die hard.

## ACUTE INTESTINAL OBSTRUCTION\*

E. M. ELLIS, M. D.

CROWLEY, LA.

Modern surgery, in relieving acute-conditions has made rapid strides in recent years, greatly reducing the mortality, especially of acute adominal pathology, and yet the morbidity of acute obstruction is taking too great a toll of human life. It, therefore, is incumbent upon the surgeon to act quickly, and with a full appreciation of the tragic results of watchful waiting.

Cases of intestinal obstruction exemplify better than any other condition how dangerous it is to wait for the fully developed clinical picture, before arriving at a decision. Our main object must be to recognize when surgical relief should be afforded, and we must decide rapidly if our reflections are to be of any use to the patient.

When we remember that we are dealing with a condition whose mortality rate, in the hands of the best of surgeons, is from fifty to sixty per cent; we believe that it is highly expedient to sound a note of warning to every physician and surgeon to do something to impede these alarming statistics, and we hope by agitating this subject ever and anon, that all of its symptoms, features and phases will become so familiar that none of us will overlook an early diagnosis, and a quick decision.

Believing that we are more interested in curing a disease, than in knowing its cause, I shall not dwell upon this phase of the subject, except to say that we should consider the age, as an important factor, as we all know this is more prevalent in children

than in the adult, especially the intussusception type, although this type sometimes occurs in adults.

*Pathology*—In view of the rapid fatalities which result in these cases, it becomes highly desirable to find the source and nature of the toxin involved, and on this subject there has been much said and written in recent years. Stone found in the lumen of the obstructed loop, a toxin which, when injected intravenously into normal animals causes the symptoms of obstruction. Certain chemicals are undoubtedly developed as the result of protein disintegration, and cause the symptoms prevalent in acute intestinal obstruction.

J. W. Ellis has made from the laboratory of surgical research, of the University of Pennsylvania, a most exhaustive study of all the data up to date on this subject, and concludes that death in these cases is due to a form of chemical intoxication, and that this poison is undoubtedly elaborated in the cells of the greater part of the mucosa of the small intestines, but chiefly in those of the duodenum, and that it is manifestly excreted partly into the lumen of the intestines, but the larger part passes into the lymph stream.

Werelius, of Chicago, has, with some good reasoning advanced the theory that death is due to hepatic insufficiency; that death is always preceded by complete aperistalsis, and with this bile secretion stops. He further argues that with the cessation of bile, all the other functions of the liver cease simultaneously. This theory bears out my observation that in all cases of late vomiting of obstruction, there was complete absence of life. Brooks, however, claims that it is the effect of the toxemia on the hepatic cells that causes this cessation of bile. From the above opinions, it would appear that there is no one factor that completely satisfies everybody, but we do know whether it be protease intoxication, bacterial poisoning, injury to intestinal mucosa, dehydration or otherwise, that the cause of death is a potent and complex agent, that should be dealt with quickly, to be of any ultimate benefit to the patient.

*Symptoms*—In seventy-five per cent of the cases, the only symptoms present in early stages are peristaltic pain, vomiting, constipation, with tenesmus and bloody mucus. These symptoms should at once arouse suspicion of obstruction, and every effort

\*Read before the Louisiana State Medical Society Opelousas, April 22-24, 1924.

should be made to decide the point, without delay. Stercoraceous vomiting, abdominal distension, rapid feeble pulse, and symptoms of collapse, belong to the late stages, and surgical aid then will be of no avail.

The diagnosis is often rendered difficult, because the symptoms may be masked by those of initial shock, which manifest itself by accelerated pulse, and collapse. In very severe cases these symptoms merge almost uninterruptedly into the paralytic manifestations of the terminal stage, so that the real signs of obstruction are not observed at all.

Repeated percussion and auscultation afford some aid in diagnosis, if we repeatedly hear at any one place a metallic note, splashing noise, and if the abdomen appears asymmetrical, with a localized area of the intestine more resistant than its surroundings, we ought, especially think of ileus. On the other hand the prevalence of dead silence from the beginning, in the equally distended bowel, most likely points to peritonitis, or at least to a severe toxic intestinal paralysis. If obstruction is high you have early vomiting of biliary matter, and less peristalsis. Patient may also pass gas and possibly have slight bowel movement, which without close observation, might be misleading.

If we are confronted with a condition such as above described symptoms, coupled with a failure after repeated efforts, to move bowel by high enemas, we should act at once, and not wait for the sausage-shaped mass of intussusception, and other ultra signs, that can have but one tragic end, because it is stated by good authority that when the lethal dose of toxin has been produced, within the intestine, and absorbed into the circulation, there is, at present, no known means of saving life.

*Treatment*—Early surgical interference, aided by external heat, appropriate stimulation, stomach lavage, the introduction of fluids by every known means possible, before, as well as after operation, are all life-saving measures.

Fenny says it is better to have a poor operation, on a patient in good condition than a good operation on one in bad condition, and this certainly applies to acute obstruction. It has been my experience that the longer a patient lives with this trouble, before operation, the sooner he will die after operation.

We should not be carried away with any one method of procedure, but be governed

by the merits of each case. If the case is late, and too severe, a two step operation may be best: First and foremost is the drainage of the obstructed loop, either by fistula or enterostomy. This may be made anywhere above the obstruction. It has been my practice in a few cases to irrigate the loop before making the enterostomy. I believe that if the case is not too desperate, and there is a reasonable chance for getting by, a clean resection, with an anastomosis will give almost as good results as any mode of procedure. If a patient is almost hopeless, as we often see, I think it is best to make a long fistula in the loop, at any point, giving as free drainage as possible, and depend on your fluids and stimulations for the rest.

During the past few years we have had about fifteen cases of acute obstruction at the Crowley Sanitarium, with a mortality of practically fifty per cent. The time in which most of these cases were admitted was from twenty-four to seventy-two hours after onset of the disease. Only one case that was received within the first twenty-four hours proved fatal, and this case seemed to be of a fulminating type, in which the toxemia produced a collapse in this short length of time. The delay in getting these cases into the hospital would lead us to believe that there is no class of acute cases more often unrecognized and misunderstood.

With your permission, I would like to report a few cases that fell into our hands, for treatment, during this period of time.

First, I wish to refer to a case that died thru an error in diagnosis. A young man taken suddenly with pain and vomiting, and all the earmarks of acute appendicitis. He was sent in for a hasty operation, as his condition seemed to be rather desperate. With no experience to guide us, this having occurred during the adolescent days of our surgical career, we at once made a vicious attack upon an innocent appendix. Immature as we were, we were not satisfied with the condition we found, but hesitated to go further. Consequently our patient died very promptly, and on post mortem examination, we found a knuckle of small bowel, caught under a band of mesenteric adhesions, producing complete obstruction, causing, of course, all the stormy symptoms, and likewise the patient's death.

The second case I wish to refer to is that of a little girl thirteen years old who was admitted to hospital seventy-two hours after the onset of disease, having arrived at the hospital at twelve o'clock at night, after being brought twenty miles in an automobile. Her condition was very bad, but after opening abdomen we decided to do a resection, which necessitated removing about eighteen inches of intussuscepted and gangrenous bowel, which in this instance was the first portion



of the jejunum, making a lateral anastomosis, therefore draining the contents of the loop directly into the distal segment of the bowel, which, in no case has proven to be toxic, closing the abdomen with a small cigarette drain, placed some distance from the anastomosis. When I remembered Murphy having stated that no obstruction of this particular type would recover, after forty-eight hours standing, I had little hopes of the patient's recovery, but with the assistance of the physicians who were with me in this case, working in relays of six hours each, giving our personal attention to the administration of all fluids, which we gave by every available method, the little patient soon began to gain ground and made a good recovery.

The third case was a man sixty-five years old was taken suddenly ill, with pain in right iliac fossa, with nausea, but no vomiting. Was seen at once by physician, who made a diagnosis of appendicitis. Hypodermic was given, and patient rested well during the remainder of the night. I saw the case the following morning, in consultation, at which time a mass could be felt at McBurney's point. The patient did not appear to be very sick, and yet this mass made us think of obstruction. We had failed to get any results from high enemas, and therefore ordered him to the hospital at once, and when the abdomen was opened a double intussusception was found, the lower ilium was invaginated into itself, and this mass was forced through the first part of the colon. There was a complete stasis of the circulation of all the tissue involved, and the edema had advanced to such a stage that it was impossible to disinvaginate the mass. We, therefore, decided to make a clean resection, removing the lower end of the ileum, with cecum, and part of the colon, making a lateral anastomosis between the ascending colon and the ileum, patient made a slow but complete recovery.

The fourth case with intussusception, was operated on at the end of twenty-four hours, with resection and lateral anastomosis, recovered. But this recovery was rather stormy during the first twenty-four hours, having developed convulsions, twelve hours after the operation, which lasted at intervals for twenty-four hours. It is barely possible that convulsions were due to excessive amount of fluids which were used in this case.

We had, in all, eight cases of resection, with four recoveries and four deaths. There were two babies, five and six months old, operated on six hours after the onset, in which reduction was very easy, with no untoward symptoms in recovery.

One case with disinvagination, with death following. The other cases were brought in late, with practically no chance of recovery, a simple fistula being made in the obstructed loop to establish drainage, but none of these cases recovered, but died as a result of failure of early diagnosis.

#### DISCUSSION

Dr. Louis B. Crawford (Patterson): I think the remarkable thing about this paper is that here has been tackled what I consider the hardest problem in surgery, by a one-horse surgeon in a one-horse town with a one-horse hospital. That

to me is a remarkable thing. Fifteen or twenty years ago that was unheard of; such patients had to be taken to the large centers. I wish to point out that fact—that the rural districts are coming to the fore.

It was my pleasure to see one of these cases which Doctor Ellis mentioned. He asked me to see the patient and told me what he had done. I said there was no use in my seeing him, but afterwards when I saw the boy he was not only living, but his facial expression was good. I said then that since he was living it was fair to expect that he would pull through.

There are a lot of small, successful hospitals growing up in the country that we ought to respect, and I think Doctor Ellis shows that he is running one. He handled his subject admirably.

To me the hardest problem in surgery is this, because, as the French say, the surprises are always there. We should realize that what we need is judgment, for unless we have judgment in this type of intestinal obstruction we will not be able to handle these cases. I have had quite a few. One case I might mention here. It shows that we should guard against jumping at conclusions. This was an individual with symptoms of intestinal obstruction, and I jumped at intussusception and was almost on the point of operating. Fortunately, I thought of rectal examination, and there I found a worm. This shows that we ought to examine our cases more than carefully.

In no type of surgery do we meet as many emergencies, and for this reason we have a mortality of 50 to 60 per cent. If we could guard against emergencies we could ask for aid from the X-Ray laboratory. But when we are forced to go into an acute abdomen in an emergency we are running up our mortality.

Dr. H. B. Gessner (New Orleans): Doctor Ellis has very properly laid stress on the importance of early diagnosis. There are two factors that I have found helpful in making early diagnosis to which I would like to call your attention. One is the history of a previous operation, and the other is the presence of hernia. Quite a proportion of our cases of obstruction follow previous operation. We operate for acute appendix, possibly for abscess with many adhesions, and a year or two afterwards we find signs of beginning obstruction. The history of previous operation in a case like that is very useful.

Another condition which I have met several times in the last few months is hernia. When we see a patient with early signs of obstruction it is a good thing to inquire into the presence of hernia. Sometimes patients with hernia do not think much about it even when it becomes strangulated and causes symptoms. In some cases the hernia is internal, in which case, of course, we cannot be sure of the condition. But sometimes there is an external hernia to which the patient pays no attention. I saw a case like that within the last few weeks—the patient, a man about 60, was steadily hiccupping and vomiting. He had no distension. Examination showed he had a femoral hernia which had been present twenty years, but was not giving him any conscious trouble. Exploration showed a strangulation of the hernia, and through the inguinal method of approach a gangrenous bowel was exposed and resected. I believe if we bear in mind the history, with reference to operation, and the presence of hernia, it will help us quite often in making an early diagnosis.

As to the one-horse surgeon in the one-horse town with a one-horse hospital—one of them has just paid a glowing tribute to another. Perhaps it will be of greater importance for one who lives in a large city to pay tribute to the surgeon of the smaller place. We who live in New Orleans know that all the way from Shreveport on the north, to Lake Charles on the west, and Baton Rouge on the east, there are small towns from 3,000 up that have hospitals in which excellent work is being done, and I take great pleasure in paying tribute to the good work that is being done by men like Doctor Ellis and Doctor Crawford and others whom I could name.

Dr. D. I. Hirsch (Monroe): Here is another one-horse surgeon. I have been unfortunate in having a good many of these cases. I will make the statement that in most cases a diagnosis of obstruction can be made within twenty-four hours. There is no subject as poorly handled in the textbooks on surgery as intestinal obstruction. If you bear in mind what happens when you have obstruction you will soon see that diagnosis can be made. The classification of obstruction is bad. We may classify it this way: First, you have obstruction; second, strangulation; third, thrombosis, and fourth, ileus. Obstruction is simply mechanical; strangulation is interference with the circulation; thrombosis is the formation of a clot, and ileus is paralysis of the gut. You may have obstruction for twelve to twenty-four hours in which you do not get strangulation or any abdominal reaction; no rigidity, but some pain and vomiting. Then if you have strangulation the abdomen reacts. With thrombosis you get a quick reaction and the abdomen is rigid. Ileus is due generally to peritonitis.

Great attention should be paid to the history, but the laboratory is not of much value in the diagnosis of obstruction. There are a few points in the diagnosis of obstruction that it might be well to bear in mind. If the pain is near the umbilicus, if you watch you will see a peristaltic wave go up to a certain point and stop. Another thing is enemas. There is nothing I know of that will give more data than enemas, if you watch them yourself and do not take anybody's word as to the nature of the stools. Another sign is pressure. Deep pressure on the abdomen will frequently relieve the pain for twenty minutes. Sometimes the obstruction is so tight that you get a severe strangulation immediately and you relieve the pain with deep pressure. With a thrombus you get acute, sudden pain, rigid abdomen, early vomiting and high leukocyte count.

Dr. Guy A. Shaw (Loreauville): The one-horse surgeon has had his say, and now comes the general practitioner. I had a case ten days ago that came from Port Arthur, a woman 57 years of age whom I had treated before. I reduced a strangulated umbilical hernia two years ago. As she had recovered from it she came back to me now. Three weeks before she came she had severe pain in the abdomen and commenced to vomit. She continued to vomit and retained nothing at all during this time. She was brought to me in an automobile three weeks afterwards and of course was in a desperate condition. She was very stout. I at once diagnosed obstruction. There was no evidence at the umbilicus of anything, though a tumor could be felt below. There was no time to be lost, so I opened the abdomen under local anaesthesia and we found there quite

a tumor, as large as my two fists. The omentum surrounding it was thickened to almost  $\frac{3}{4}$  of an inch and there was an angle of intestine caught in there. I dissected out the omentum to free the intestine and found it necrosed in that one spot, so I turned under a fold and stitched it to the bowel and back and she made a very good recovery. She said the next morning she felt better than since her operation. That was due to reducing the strangulated hernia—the whole thing had been returned, but the omentum had caught the intestine. She said that ever since the first operation she had not been well, that she often felt pain, although there was no other symptom.

Dr. Daniel N. Silverman (New Orleans): In some cases there may be such a thing as prophylaxis of intestinal obstruction—such cases as gall stones and certain congenital malformations. I want to mention one case of congenital malformation with late symptoms. This man was 40 years old and had had his symptoms for one year. These symptoms were similar to those we find in peptic ulcer. His pain came on three and a half hours after eating, relieved by alkolia and thinking it was peptic ulcer I sent him to Dr. Menville, and much to my surprise he reported a right diaphragmatic hernia involving the transverse colon distal to the hepatic flexure. Evidently this was just the beginning of an obstruction. It is of interest also because the right diaphragm is the first to close, and because of the position of the liver, right diaphragmatic hernias are quite unusual. This case may illustrate prophylaxis of intestinal obstruction.

Dr. T. J. Fleming (Mansfield): Just one word on the diagnosis, and that is to note the facial expression. Some cases of obstruction have no muscle rigidity, that is early, and one of the first things you notice is the facial expression. That is one of my main diagnostic points. You get no rigidity, but you notice the drawn, anxious, facial expression.

Another point I wish to stress a little more is the second stage operation. My first four cases were operated and three of them died in the one stage operation, the other finally got well, but it left her with a big hernia because it was a pus tube case and I had to operate in the section of the infected area. Since then every case I have had, I do a high jejunostomy, put in 16 French catheter, doing that under local. It is done in a few minutes and the patient is not conscious of any pain at all. Put them on a 5 per cent, glucose solution and alternate with soda by the Murphy drip through jejunostomy tube. This relieves them of the toxins. I leave in the catheter in these cases 5 to 9 days. It relieves the distension and the band that is forming will give way and you have to go back for the 2nd stage of the operation but seldom. Two of my cases were this kind, and the third one I took out the tube on the 9th day. The patient was able to be up and about ready to go home. Then he got his second attack of obstruction, and then I went in and did a radical operation in a clean field as the ruptured appendix wound had healed and released the band and he went home in fine shape.

Dr. Thos. B. Sellers, (New Orleans): Dr. Gessner spoke of the importance of a history of a previous operation in making a diagnosis of an intestinal obstruction.

I have in mind a case that Dr. Parham and I

handled. Mr. H. age 50, family history negative. Past history: usual diseases of childhood, typhoid and yellow fever. Stomach trouble twelve years ago and continued until operated on ten year ago (posterior gastro-enterostomy).

Present illness: Began vomiting rather suddenly just after dinner about 8 p.m., associated with severe abdominal distress. At first he vomited ordinary stomach contents, mixed with bile. About one hour later he began to vomit blood in large quantities, mixed with bile. The abdomen was scaffold instead of being distended, unable to palpate a mass. Very little tenderness over abdomen, slight rigidity in upper portion. Very good results were obtained from repeated enemas (gas and fecal matter). Repeated hot gastric lavage was given; also 5 per cent calcium chloride was given intra-venously, but did not stop the patient from vomiting blood.

After about 24 hours observation we decided to explore the abdomen. A tentative diagnosis of the obstruction of the jejunum was made. We found several feet of the upper portion of the jejunum had herniated through the opening into the lesser cavity. (Made for the posterior gastro-enterostomy).

Dr. E. M. Ellis (closing): I wish especially to thank the doctors for their kind discussion of this paper, especially Doctors Crawford and Gessner and their very kind reference to the one-horse hospital.

I purposely left out in this paper many of the causes that might be referred to in regard to the etiology, such as postoperative hernias, etc., because a paper of this nature, dealing as it does with a subject of such magnitude, can only touch the high spots and bring out discussion to keep this vital subject before the doctors everywhere in the country, that they may be on the alert for all acute abdominal conditions which every day are taking such heavy toll of life. If I have done that, I think the paper will have served its purpose.

## THE TREATMENT OF STRICTURE OF THE URETHRA.\*

A. NELKEN, M. D.

NEW ORLEANS.

Stricture of the urethra is today a rarer condition than it was in the days of Thompson and Otis. This is due in part to the fact that we have discontinued the use of strong solutions of nitrate of silver and of zinc and lead salts in the treatment of urethritis, but chiefly, I am convinced, because we no longer rely, as most of our predecessors in urology did, on internal medication in the treatment of this condition. Rather, we control the discharge from the incipiency of the attack with local injections of mild solutions of permanganate of potash, the organic silver salts or other similarly

non-irritating drugs. As a result, urethral stricture rarely occurs save in neglected or mistreated cases of gonorrhoeal urethritis.

While stricture following localized chronic inflammation is the common type, there are other classes of urethral stricture that are seen often enough to require mention. Congenital stricture sufficiently severe to give rise to urinary obstruction is comparatively rare and is usually associated with hyposadias or other deformity of the genitals. Such strictures are usually located in the pendulous urethra and should not be confused with a rarer congenital deformity that produces a somewhat similar train of symptoms—namely, congenital valves in the posterior urethra. Traumatic stricture, as its name indicates, follows injury. After severe trauma, where there has been much damage to the urethra and peri-urethral tissues, the subsequent production of dense scar tissue offers many difficulties in the maintaining of a permanent and adequate urethral lumen.

The so-called "spadmodic stricture" I will mention only to dismiss. That urethral spasm can persist long enough to cause more than temporary retention of urine is contrary to my experience.

There are many types and degrees of urethral stricture: soft strictures and hard strictures, to say nothing of the elastic strictures that recontract almost as soon as the sound is withdrawn; so-called "strictures of large calibre" that are often not strictures at all but merely points of normal narrowing; filiform strictures, which, as their name indicates, are so tortuous or so tight as to offer difficulties in the passing of the smallest guide; and impermeable strictures, where the urethral lumen has been entirely obliterated. In addition, the stricture band may be a narrow ring of scar tissue obstructing the urethral lumen or it may be a dense infiltrating mass involving both the urethra and the peri-urethral tissues.

The present day teaching as to the proper management of strictures of the urethra is that operation should be resorted to only in cases where the passage of dilating instruments is not possible in spite of most patient effort,—a *dernier ressort*, in fact. This is largely a reaction from the abuses that followed the general acceptance by surgeons of the teachings of F. S. Otis. Otis was a forceful and an enthusiastic teacher and writer. In season and out, he preached

\*Read before the Louisiana State Medical Society, Opelousas, April 22-24, 1924.

the cutting of urethral strictures rather than the treatment by means of dilatation. His disciples took up his teachings with enthusiasm if not with discrimination. Cutting of urethrae, both contracted and normal soon became the fashion not only for the cure of urethral stricture, but likewise for all chronic urethral discharges. Otis taught that all gleet was due to stricture and the cutting operation was a certain and rapid cure. It was inevitable that a reaction should set in against this orgy of urethrotomies, a reaction which still persists, to a point where dilatation is often employed in the treatment of strictures where operative interference would seem to be clearly indicated.

In determining the indications for treatment of urethral stricture, there are a number of points that must be borne in mind. Other things being equal, strictures of the pendulous urethra should be treated by dilatation rather than by cutting. For one thing, internal urethrotomy, which is the operation applicable to strictures in this location, is not as satisfactory an operation as is external urethrotomy. The tendency to re-contraction is greater after internal urethrotomy and deformity of the penis with troublesome curvature of the organ is sometimes seen following the scar that comes from too free incision of the cavernous bodies. Strictures of the pendulous urethra usually do not offer the same difficulties in the passage of instruments as does tight strictures of the bulbous urethra, and, because of the absence of dense periurethral infiltration, such as is not uncommon in the perineal type of stricture, is more amenable to dilatation.

Soft strictures, no matter where located, that dilate readily and without undue reaction, should not be operated upon. I would, however, markedly broaden the scope of operative indications for strictures in general. Where instrumentation is followed by excessive bleeding or by septic chills and fever operation should be done. Strictures that offer repeated difficulties to the passage of instruments should be operated upon. Strictures that will not dilate beyond a certain minimal degree or strictures that contract rapidly after dilatation, should be operated upon. Strictures in patients that are inclined to be negligent or in patients that avoid treatment because of fear of pain should be treated by operation, I would go even further and say that for strictures of the perineal urethra that do

not come within the category of "soft strictures dilating readily," as mentioned above, operation rather than dilatation should be the procedure of choice.

External urethrotomy, with a guide, and with the use of local anesthesia, is as simple as is the passage of a sound and as safe. A 5 per cent solution of procain is injected into the anterior urethra and retained by means of a clamp for 15 minutes. While waiting for anesthesia of the mucus membrane, the perineum is sterilized and the skin and tissues overlying the strictured portion of the urethra are infiltrated with 1-2 per cent procain solution to which has been added 4 drops of supra-renaline solution to each ounce of the procain. Then, the clamp being removed, a sound is passed from the meatus through the strictured area into the bladder. Where the passage of a sound is not possible, a filiform guide is passed through the stricture and a tunnelled sound threaded on the filiform until it is obstructed at the stricture. An incision is made through the skin and muscles down to and into the urethra, laying open the entire strictured area. The cut edges of the urethra are localized with guide sutures and the sound removed. Where a filiform is used, care must be exercised lest in incising the urethra, the filiform be cut across and the bladder end lost. This is not so serious an accident as it sounds, however, since the piece of filiform is easily removed from the bladder through the operating cystoscope at a later date.

External urethrotomy with a guide is one of the simplest of surgical procedures. Without a guide, the operation may be one of extreme difficulty. This difficulty consists of finding, in the dense mass of scar tissue that usually makes up this type of stricture, the bladder end of the urethral opening. I am not partial to the staining of the urethral tract by the preliminary injection into the urethra of some one of the aniline dyes. In using this method, the pressure necessary to force the dye into the bladder may likewise force it into any false tracts that are present, and even by rupture into the diseased tissues of the strictured area. Where we are compelled to operate without a guide, we have, in my opinion, one of the important indications for the use of local anesthesia. The incision having been made upon a sound introduced into the urethra down to and into the stricture, careful search is made for the bladder

end of the urethra. If it can not be located, the patient is requested to urinate. Usually the escaping urine will at once show us the urethral orifice. So important do I think is the assistance that the conscious patient can give in this way that, when, for any reason, local anesthesia can not be used, I resort to spinal anesthesia, under which the patient is still capable of voluntarily voiding. I have operated on many cases of impermeable urethral stricture, many of them with urinary extravasation, and I am glad to say that I have never yet been forced to open the bladder and do a retrograde catheterization because of inability to find the urethra at orifice.

The urethra having been opened, a no. 24 catheter is introduced into the bladder through the perineal wound and anchored with a silk-worm suture. A small catheter is then introduced from the meatus into the wound after the passage of a full-sized sound has assured us of the calibre of the urethra, and its ends joined. The perineal wound is then closed with cat-gut and silk-worm in such a way as to bring the two catheters in contact and thus leave a minimum of open wound surface. In simple, uncomplicated cases, after three days, the catheters are withdrawn. Usually the patient will void through the perineal wound for a short time. Sometimes, he voids immediately through his meatus. His hospital stay need not necessarily be prolonged beyond the time of the removal of the catheters. Sounds should be passed in about a week and, in the majority of cases, repeated at constantly lengthening intervals in order to assure the patulousness of the canal. This last statement will be seized upon by those who advocate dilatation instead of operation as confessing the insufficiency of the surgical procedure. But the passage of large sounds after a properly performed external urethrotomy becomes a simple and painless process. In the large majority of cases it will be found that after a reasonable time further passage of sounds is unnecessary, the urethra showing no tendency to recontract. In others, sounds have to be passed only at long intervals, i.e. three or four times a year.

I have made no attempt in this brief paper to describe the less usual operations for urethral stricture such as excision of the strictured portion of the urethra or the extensive removal of scar tissue, as is sometimes required. Where these more elaborate procedures are indicated, all surgeons

agree upon the necessity for some form of operative interference. What I hope to have shown is that in that large class of "borderline" cases, where it is a question of judgment to decide between instrumental and operative treatment, the simplicity and effectiveness of external urethrotomy should make it the procedure of choice.

#### DISCUSSION

Dr. M. H. Foster (Alexandria): With the paper as presented by Doctor Nelken I am happy to find myself in almost complete accord. It is certainly patent to most of us dealing with strictures that we do not see them with anything like the frequency of several years past.

The pathology being borne in mind, it is easy to tell which stricture will dilate and which will not. The pathology is not a hard and fast proposition, as to time of duration, but is based upon the progress of the fibrous tissue formation. This development varies within a period of 2 years, more or less. At first strictures are soft and pliable; later hard and unyielding. In the negro race the tendency is much more marked for hard fibrous tissue formation.

I do not recollect any mention by the essayist of using a soft, flexible bulbous bougie in making a diagnosis of stricture, and I have found it very valuable. If the size of the stricture is found to be less than 16 to 20 I never use a hard, rigid, instrument; it is much better to use a soft, flexible bougie.

As to the anaesthetic, you often see recommended the use of novocain or cocaine. This is conditionally wrong. Novocain is relatively inefficient for mucus membrane surface anaesthesia but cocaine is too dangerous to employ. Since using Butyn I do not see where novocain or cocaine should be used in intra-ureteral anaesthesia.

In regard to drainage, after external urethrotomy a very useful suggestion has been made by Doctor J. Rilus Eastman of Indianapolis. After making the external urethral incision, having completed the operation, the catheter is left in the bladder and brought out through the perineal wound and attached with catgut to another catheter lying in the pendulous urethra, the two catheters lying at right angles, and the external catheter is not so apt to be lost.

The proportion of strictures which should be subjected to operative measures on the one hand, to those which should be reserved for non-operative treatment on the other, is somewhat variable, and is dependent upon several circumstances. I believe that more than 90 per cent should be relieved by gradual dilatation, and that less than 10 per cent will require surgical intervention.

Dr. Paul Gelpi (New Orleans): Dortor Nelken has very clearly described the subject of his paper. I do not believe urethrotomy is used as frequently as in the past, but to my mind there are very clear indications for external urethrotomy, whether anterior or posterior. One is in the anterior urethra where the element of time has to be taken into consideration, where there is no response to palliatives, and in the so-called elastic stricture. If the urine is in good condition I do not hesitate to perform a urethrotomy on the posterior urethra, but in those cases I leave the catheter in ten to twenty-four hours, with a triple

object in view. First of all, to check the blood; second, to allow the wound to be well covered with plasma and in that way to keep the urine from coming in contact and causing urethral chill.

As to external urethrotomy, I think the indications are clear cut. If we have urinary fistula, if we have a great deal of induration in the perineum, and especially if we have a septic stump, I think the indications are unreliable.

Contrary to what my friend, Dr. Nelken, does, I do not use local analgesia. I use spinal analgesia, and my reason is that very frequently there is less reaction, and this facilitates the operation.

Where there is dribbling of urine these cases ought to be operated at once, because there is danger of extravasation.

I enjoyed Doctor Nelken's paper very much. I believe that the indications are usually clear cut, and where they are we should not hesitate.

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## FACTORS IN HALITOSIS FROM THE GASTRO-ENTEROLOGICAL STANDPOINT.\*

A. L. LEVIN, M. D.

NEW ORLEANS.

It may seem strange to select for our consideration the subject of halitosis or offensive breath. We are accustomed to direct our attention to symptoms which express definitely serious changes in the mechanism of the human machine; such as pain, loss in weight, blood or tissue changes and similar phenomena. An individual presenting a history of bad breath and nothing else is usually met with a sense of luke-warm sympathy and is quickly dismissed with a dose of calomel, tooth brush advice or a mouth wash, and sent off with a note to the specialists of the oral cavity. It is too simple a phenomenon and does not signify danger, consequently it is filed away as a case of minor importance.

Offensive breath is regarded by many writers as a mirror reflecting diseases of the mouth, nose, pharynx, larynx, lungs, gastro-intestinal tract, renal and nervous systems, and metabolic disturbances. This paper deals exclusively with factors found in the gastro-intestinal tract based on a careful study of each case in co-operation with the specialists of the oral cavity. The cases which I will describe will clearly demonstrate that it is rarely excusable for a physician to minimize the history of offensive breath, especially in chronic cases which cause the afflicted a real sense of distress. The gastro-enterologist finds as

his guide on the subject, a generalized statement in textbooks, "Among the numerous causes of halitosis are oral sepsis, dyspepsia and constipation." In order to correct such an abnormality, we must first understand how it is produced. Why do we so often see cases with marked oral sepsis, dyspepsia and constipation who do not suffer from halitosis? Again, we see quite often sufferers from halitosis with practically no evidence of oral sepsis, dyspepsia or constipation. Are the factors, oral sepsis, dyspepsia and constipation similar in their chemical action? Do they act as a disturbing element in liver function? Is disturbed liver function a vital factor in halitosis? As long as we do not know how it is produced, it is impossible to attempt its correction. We can probably find an answer to the above questions and have a clearer analysis of facts from the writings of Rolleston, Heyd, Killian, Lederer, Deaver and others.

Rolleston calls our attention to a rather characteristic offensive breath which is found in cirrhosis of the liver. It resembles the smell of dried and decomposing blood. It is probably due to a failure of antitoxic function of the liver and a consequent passage into the blood of poisons generated in the alimentary canal. Hence, it is a bad omen. This bad omen, expressed by Rolleston, is certainly worthy of our attention. Cirrhosis of the liver is more common than we actually realize. It is not necessary for fairly well developed cirrhosis of the liver to have marked symptoms. It has been demonstrated that one of the outstanding features of the liver, aside from its many specific functions, is its ability to regenerate itself. The hepatic regeneration which takes place is sufficient to carry on liver function, even in well advanced cirrhosis. Bassler found that during 1914, in 321 laparotomies, there were 39 cases of definite cirrhotic liver changes. In another group of 2567 laparotomies, there were 221 cases of cirrhosis, or about 8 per cent. While speaking of liver cirrhosis, very interesting facts are clearly emphasized by Heyd and Killian, concerning the liver and its relation to chronic abdominal infection. We can summarize the facts as follows:

(a) That the mesenteric venous blood is surcharged with products of absorption from stomach, duodenum, pancreas, small intestines, and the major portion of the large intestine.

\*Read before the Orleans Parish Medical Society, December 8th, 1924.

(b) That under normal conditions, the liver possesses a marked depurative and detoxifying power whereby noxious byproducts from the gastro-intestinal tract, from cellular activity in general, or from bacteria, are rendered inert or harmless.

(c) That bacteria are constantly passing into the system from the intestines and from various other points and are destroyed in the mesenteric and other lymph nodes, and in the tissues. With the bacterial destruction, there is a liberation of toxins which produce a low grade chemical irritation resulting in degeneration of liver cells.

(d) That the frequent association of gall bladder disease with histologic evidence of liver degeneration is a foregone conclusion. Marked liver changes have also been observed in associated pathology of the appendix and ulcer or carcinoma of the stomach.

Lederer summarizes in a few well expressed phrases the manifold factors producing halitosis, thus—"Any condition which will alter the character of the gases entering the lungs through the capillaries of the pulmonary arteries." He divides the various types into two classes, (1) those in which the contamination of the breath takes place after the gases enter the lungs and (2) those in which the contamination of the gases takes place in the system before they enter the lungs.

Bearing in mind the above facts, we can safely reason that halitosis is the result of a gaseous absorption into the blood stream of bacterial toxins; that oral sepsis is not necessarily a primary factor. It is possible that the contamination of the liver through the abdominal viscera takes place first; the liver thus gradually loses its protective function by the constant inflow of a contaminated portal circulation, which passes the liver on its way to the lungs, the product of bacterial decomposition constantly passes through the large exit, the oral cavity. A favorable atmosphere is thereby created for bacteria and fungi to grow and develop. The coated tongue is not the result of poor mastication, as we were taught, but the reflector of a contaminated sewerage system (biliary apparatus). Halitosis, in our gastro-intestinal group of cases, in my opinion, speaks for a clinical manifestation of a biliary toxemia. Oral sepsis, dyspepsia and constipation are but contributing factors in destroying liver function; once that has been accomplished, halitosis is nature's warning signal of a disturbed

important function in the human machine, as much as pain is a reminder of the development of a serious condition.

The gastro-enterologist usually meets the following types of sufferers from halitosis, namely.

(1) The early type of biliary toxemia, easily relieved by washing through the sewerage system.

(2) The type bordering on more or less permanency with suspicious tissue changes.

(3) The incurable type with definite tissue destruction and loss of protective liver function.

I have selected from my records cases to represent each group.

Case 1. J. M., male, 21, occupation clerical, consulted me first on November 20, 1922. Complaint—Fetor oris past 3 years. P. H. Tonsillectomy 2 years ago for same trouble. No relief. Teeth carefully examined with negative results. No nasal, antrum or sinus infection. P. I. Fetor oris especially marked about 3 hours after supper. Symptoms of indigestion very slight. Experiences very seldom a slight cramp in the upper abdomen and on one or two occasions he was nauseated and had temperature of about 100. History of definite cold at that time. Bowels are regular. No tobacco or alcohol. Denies venereal disease. Physical examination negative except for heavy coated tongue and mild acneiform eruption on the face. Gastric analysis.—Empty stomach reveals excessive mucus, bile at end of lavage, no food residue, HCL present. One hour test—quantity normal, free HCL 37, TA 56, bile none, mucus normal. Urine—Indican three plus, trace of bile, otherwise negative. Chemical examination of saliva—Acetic acid 0.2, HCL trace. X-ray G. I. tract—Probably cholecystitis. Treatment—Dietary and medicinal regime along the lines of biliary toxemia. Fetor oris markedly improved. Patient did not return until November 20, 1924. Same trouble since he neglected to observe the dietary regulations. He has been put on the same treatment. Quick relief followed.

This case evidently belongs to group 1, in which the biliary toxemia can easily be corrected, but disregarding proper advice, he may eventually fall into group two or three.

Case II. Patient was referred to me in Oct., 1923 from the E.N.T. specialist with the following note: "This patient has been suffering from a bad breath and a bad taste in her mouth for some time. Her X-ray plates show a hyperplastic sphenoiditis, but I am not convinced that this is the cause of her complaint." History of case. Female, 36, one child age 13. Complaint—Bad breath and bad taste for over a year. P. H. Five year ago appendectomy and ventral fixation of uterus. Present illness—On two occasions, recently, has been nauseated, she ascribes it to error in diet. There is a slight tendency to constipation. Symptoms of indigestion very slight. Suffers from backache. What worries her most is bad breath and bad taste in her mouth which is not relieved by treatment along lines of oral infection. Physical examination negative. Urine negative. Blood Wasserman negative. Blood picture—Hemo. 75 per cent, otherwise normal.

Gastric analysis—Achyilia. This test has been repeated at various intervals with same results. Patient has been put on a mixture of HCL, pepsin and gastrone; proper diet was outlined. The relief was instantaneous, she is well ever since. She is still taking from time to time the acid mixture.

This case belongs to group II, there are evidences of tissue changes, the HCL factor is evidently a bactericidal and diminishes bacterial absorption into the portal circulation.

Case III. Female, age 39, referred for epigastric pain and constant taste of blood since a spell of hematemesis six months prior.

History—Gastrosuccorhea for past 8 or 10 years; from half to a cupful of gastric juice is regurgitated 2 or 3 times a week, or sometimes daily. Six months ago, hematemesis followed by tarry stool for 14 days. Since then, she has a constant taste of blood which makes her sick; she also suffers from epigastric pain having a direct relationship to food. Bowels are constipated, stools tarry. Lost considerably in weight. No history of pulmonary involvement. Past history—Eight years ago appendectomy, salpingectomy and partial oophorectomy. Menopause last two years. Exam.—Pale and enemic, eyes react to L. and A., no glandular adenopathy, oral cavity negative, lungs negative, abdomen—reveals a definite sore spot about two inches above umbilicus and a corresponding sore spot in the back. Urine negative except for four plus indican. Gastric analysis—Slight hyperacidity, occult blood positive. Stool—Positive occult blood. X-rays made twice with negative findings for malignancy or ulcer. But in spite of this, patient was put on a strict ulcer treatment. Her epigastric pain has disappeared, and the taste of blood vanished entirely. She has gained in weight and was able to resume her work.

This case represents definite tissue changes and the odor of blood is either direct or indirect by absorption through liver route.

Case IV. Male, age 35. First consulted me on May 6, 1921, for a nasty taste in his mouth, a very offensive breath and a heavily coated tongue. He gave a history that 2 years prior, he was operated for a ruptured appendix, since then he has been suffering from the usual symptoms of indigestion, but his greatest discomfort is halitosis. His tongue is always coated and he can always detect an order of rotten eggs; he scrapes his tongue four times a day and uses all sorts of mouth washes without any relief. Exam.—Sallow skin, heavily coated tongue and a palpable liver edge. Laboratory report—Blood Wassermann negative, urine negative. Gastric analysis, one hour and fractional—Definite subacidity. Duodenal intubation reveals definite gall bladder infection; the bile was dark brown with great excess of debris, numerous epithelial cells and occasional pus cells. He was given a fair trial of

treatment at the hospital using non-surgical biliary drainage. About 18 duodenal intubations were made but the bile never cleared up. He was and is on a well regulated diet. His oral cavity was carefully examined by both dentists and E.N.T. specialists. A tonsillectomy was advised but assurance of relief was not given. The E.N.T. specialist was a good prophet in this respect as tonsillectomy did not give relief. Autogenous vaccine was given without any results. Every imaginable remedy was tried with absolute failure. I advised a cholecystectomy or a prolonged cholecystostomy; but patient so far steadfastly refuses further operative interference.

This case unquestionably represents the third group, i.e. Halitosis dependent on a chronic biliary toxemia with loss of protective liver function.

Reviewing these and numerous other cases, I feel justified in reaching the following conclusions:

(1) That in a large number of our gastro-intestinal cases with halitosis, oral sepsis is not the primary factor.

(2) That halitosis is a warning signal, a reminder of a disturbed protective liver function.

(3) That a patient with halitosis should receive our most careful attention.

(4) That a co-operative spirit between the gastro-enterologist and the specialists of the oral cavity is very essential, in this type of cases.

(5) That achyilia gastrica, liver cirrhosis, chronic cholecystitis, chronic pancreatitis, chronic appendicitis, peptic ulcer or carcinoma are often the factors of halitosis.

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Dr. A. L. Levin (closing): For the present I have nothing more to add except to emphasize again, the importance of such a clinical manifestation as Halitosis. The more we study individuals who suffer from offensive breath, the more convinced we will become that a toxic agent is often generated within the intestinal tract, causing thereby a pollution of the portal circulation. Non-interference with such a condition eventually leads to infection of the entire biliary tract.



# New Orleans Medical and Surgical Journal

Established 1844

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## IODINE IN EXOPHTHALMIC GOITER

Until Plummer and Boothby<sup>1</sup> reported their experiences in the treatment of exophthalmic goiter in Lugol's solution, the administration of iodine in any form was considered as being absolutely contraindicated in this disease, notwithstanding the incontrovertible evidence of its value in the prevention and treatment of simple goiter. From these recent studies, however, which have been confirmed by investigators in all parts of the world, it now appears that the untoward effects which caused it to be discarded for many years, were in a large measure, due to a lack of understanding of the physiology and the pathology of the thyroid. This recently acquired knowledge will enable internists and surgeons to use more discrimination in selecting the cases of Graves disease in which they use iodine and the results will probably be more encouraging than formerly.

A relationship between endemic goiter and iodine appears to have been recognized

for years, and many believe that it was the unknown active principle in therapeutic concoctions which have been used for centuries in its treatment. The first authentic record<sup>2</sup> is found in the *Practica* which was written about 1170 by Roger, of the University of Salerno. He described both goiter and scrofula and recommended for their treatment the ashes of the sponge and seaweed. It was not known, however, that iodine was the active substance in these remedies until 1820, when Coindet,<sup>3</sup> a Swiss physician, published the results of his investigations, which showed that Iodine benefitted many patients with goiter. The next contribution of importance was in 1850 when Chatin,<sup>4</sup> a French chemist, wrote extensively of his studies of the amounts of iodine in the air, soil and water, and drew attention to the high incidence of endemic goiter and cretinism in localities where the amount was low, a fact so well recognized at the present time in the "goiter belts" of the world.

Iodine was used to some extent since, but because of the lack of knowledge, which was made available by later studies, it was used in many cases in which it was not indicated. The unfavorable results following in such cases raised a question of its value in the minds of many. This situation was clarified to some extent when Magnus-Levy<sup>5</sup> demonstrated that thyroid tissue had a powerful effect on the heat production in the body and Kendall<sup>6</sup> isolated, in a crystalline form, a compound of iodine which Bauman had previously recognized in 1895. This substance was found to contain 65 per cent iodine and was given the name "thyroxin." Up to this time it was believed that there was no necessary association or etiologic relation between exophthalmic goiter and simple goiter, which has also been referred to as endemic, epidemic, sporadic and physiologic or adolescent goiter. Plummer then made his epoch-making contribution, which, although it dealt mostly with the difference between the two thyrotoxic syndromes—adenomatous goiter with hyperthyroidism and exophthalmic goiter—it cleared up much concerning the above groups.

The first practical application of the use of iodine in the prevention of goiter on a large scale was in the prevention of goiter in fish, which was undertaken by Marine

<sup>2</sup>Cited by Plummer and Boothby. *Ibid*.

<sup>3</sup>Coindet, A., *Ann de Chim. et Phys.*, 15:49 Cited by Fraser.

<sup>4</sup>Chatin, A. *Soc. de Biol.* 30, 352 (1850).

<sup>5</sup>Cited by Fraser.

<sup>6</sup>Cited by Fraser.

<sup>1</sup>Plummer, H. S. and Boothby, W. M.: *Journ. Iowa State Med. Soc.*, 14:66 (February) 1924.

and Lenhart, in collaboration with the Pennsylvania State Fish and Game Commission at the state hatcheries at Shady Grove, Pennsylvania, in 1909. At this hatchery the presence of enlarged thyroids had become so serious that the question of abandoning the industry was under consideration. It was found that the condition was due to two factors—overcrowding and overfeeding with artificial food. Then it was found that the addition of iodine in a concentration as low as 1-1,000,000 to the water and food caused the goiters to disappear. This led to the demonstration on the school children of Akron, Ohio, which was begun in 1916 by Marine and Kimball.<sup>7</sup> In this study 3 grains of sodium iodide was given in the drinking water once each day for two weeks each spring and fall. Almost 10,000 girls were examined during the three years and approximately half of them elected to take the prophylactic treatment. Of those taking it, not a single normal girl developed thyroid enlargement or goiter, although two girls in poor health did develop small goiters. Among those not taking the iodine, 27.6 per cent of those without goiter at the beginning developed goiter, and many of them became quite large. This convincing evidence has been corroborated in all parts of the world until Marine's original dictum that "*Simple goiter is the easiest known disease to prevent*" is generally accepted.

This study, together with those of Magnus-Levy and of Kendall, reopened the question of the value of iodine in exophthalmic goiter. The first knowledge that this element would be beneficial in some cases came to light in a most unique way. It occurred when Trousseau<sup>8</sup> relieved a case when he inadvertently gave a patient with exophthalmic goiter tincture of iodine instead of tincture of digitalis. In reporting the episode, he says: "In the course of October, 1863, I was consulted by a young married woman who habitually resides in Paris. She was suffering from subacute exophthalmic goiter tincture of iodine in- of great size. When I examined her the first time, although I had let her rest for a long while, and, although I repeated the examination several times, and at sufficiently long intervals, so as to make sure

that she was no longer under the influence, I still found her heart beat at the rate of 140 to 150 times a minute. I recommended hydrotherapy and I wished to administer at the same time tincture of digitalis, but preoccupied with the idea that there would be some danger in giving iodine, I wrote tincture of iodine instead of digitalis, so that the patient took 15 to 20 drops of iodine a day for a fortnight. When she returned to me, her pulse was 90. I found out my mistake and substituted tincture of digitalis for that of iodine but after a fortnight the pulse had again gone up to 150, so that I, at once, returned to iodine.

Experience subsequent to this case of Trousseau's taught that it not only failed to relieve the symptoms but in most instances it would exaggerate them. It remained for Plummer and Boothby to attack the problem in a modern way. These two investigators used *liquor iodi compositus* (Lugol's solution) in their studies because it is an aqueous solution of iodine (5 per cent) and potassium iodide (10 per cent) and, therefore, provides a large amount of iodine loosely combined with potassium. They found that ten drops, well diluted with water and followed by a half a glass of water, is, on an average, the optimal dose. They varied this dose in some instances but used it as the routine in most cases. In summarizing results from the use of this agent Plummer considers that a conservative estimate of the number of patients having exophthalmic goiter, so far treated with Lugol's solution, at the Mayo Clinic is six hundred. Thus far, no patient of this number, with an unquestioned exophthalmic goiter has been made worse by Lugol's solution. His series numbered forty-three cases which were intensively studied. Sixteen (37 per cent) improved markedly and promptly after the administration of iodine; fourteen (32 per cent) improved definitely; eleven improved slightly or no more than they would have after ordinary hospitalization or rest and two (5 per cent) were not affected. Starr, Walcott, Segal and Means,<sup>9</sup> Frasier,<sup>10</sup> Mason<sup>11</sup>, Jagic and Spengler<sup>12</sup> and Read<sup>13</sup> have since reported similar results.

<sup>9</sup>Starr, P., Walcott, H. P., Segall, J. and Means, J. H.; *Arch. Int. Med.* 34:355 (Sept.) 1924.

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<sup>7</sup>Marine, D., and Kimball, O. P.; *J. Lab. and Clin. Med.*, 3:40 (1917); *Arch. Int. Med.*, 22:41 (July 1918) and 25:661 (Feb.) 1920; *J. A. M. A.*, 73:1873 (Dec. 20) 1919.

<sup>8</sup>Cited by *International Medical Digest*, 6:198 (March) 1924.

As far as these studies have progressed, there are several observations that have been reported by all investigators. For example there seems to be a unanimity of opinion that the maximum benefit can only be obtained if the patient is hospitalized or is at rest in bed. Ambulatory cases, therefore, do not respond so well. They also agree that the dosage of iodine was too large in former experiments. Opinion seems to be general that iodine must be kept up for an indefinite period and any remission in its use must be very short for the reason that a rapid rise in the metabolic rate and an increase in the other toxic symptoms will occur within one or two weeks after it is discontinued. This naturally raises the question as to whether iodine can be considered as a definite medical treatment of exophthalmic goiter or as a means of improving a patient's condition preparatory to thyroidectomy. Time and further study alone will decide the first question but no doubt exists at the present time that a preliminary course of iodine so improves the physical condition of patients that they are far better surgical risks than before it was used. Indeed, the experience of many leading surgeons in the use of iodine in this way has been that not only has the preoperative and surgical mortality been reduced but the frequency of the typical postoperative hyperthyroid reaction resulting in death has been progressively decreased.

In any event, the rapidity with which the pulse and basal metabolic rate drops to normal levels in severe cases of exophthalmic goiter with coincident improvement in the general condition has been frequently spoken of as being remarkable, by some observers, in view of the fact that iodine had been so generally condemned for so many years as being one agent that would exaggerate the symptoms. It is, therefore, most fortunate for humanity that the investigators who are responsible for the reopening of this question, had the initiative, perseverance and courage to disregard former opinion and achieve what may prove to be the means of eliminating one of the most insidious diseases which attack man and animals.

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#### HAY FEVER

George Piness, Los Angeles (*Journal A. M. A.*, Feb. 21, 1925), says that before one can undertake intelligently to diagnose and treat hay fever, one must have a sound botanic knowledge of the region in which

the hay fever to be treated occurs. To obtain this information, it is necessary to make a complete survey of the flora in this particular locality, a chart being kept on which are noted the various pollen bearing plants, their season of pollination, the dates of the first and last pollination, their genera, and whether they are air-borne or insect pollinating. The technic of pollen collecting, as carried on by Piness is described and also the preparation of pollen extracts. It has been his experience in his vicinity that at least 87 per cent of hay fever sufferers are multiply sensitive, which makes it almost impossible to treat with a single pollen extract as suggested by Walker, who believes that the maximum injection should consist of from 2,000 to 2,500 pollen units, and others who assert that 1,400 units is sufficient. Owing to this frequency of multiple sensitivity, it has been the author's rule to incorporate never more than three pollens in a single antigen, but to prepare as many antigen as are necessary to meet the patient's needs. The initial dosage is best determined by the reactions obtained by testing with the various dilutions of the pollen antigen with which the patient is to be treated. The 202 cases in this study were not only followed through an entire course of preseasonal desensitization, but each of them, at the end of their normal hay fever season, was either seen in person or answered a questionnaire relative to the results obtained. Multiple sensitization has been the rule rather than the exception in the hay fevers of the Southwest.

Of the entire group, only forty-one, or 2.02 per cent, gave reactions to only a single pollen. The remainder were sensitive to from three to fifteen pollens. Treatment based on the assumption of group reactions would not be satisfactory as treatment based on the use of pollens to which the patient is actually sensitive, the reason for this being that patients who showed multiple sensitization gave reactions to pollens of various genera. Piness' results compare favorably with those quoted by others. Sixty patients obtained complete relief of their symptoms. Eighty-one patients obtained practically complete relief, meaning that they were free of symptoms to such a degree that it was possible for them to go about their every-day duties with very little if any discomfort, and required no local treatment during their hay fever season; 44 patients were relieved of the severity of their symptoms to the extent of at least

50 per cent, as compared with that of former years, meaning that the severity of the attacks was lessened, the duration was shorter, and the symptoms were not severe enough to prevent them from carrying on their daily duties. Seventeen patients obtained no relief whatever, and in one or two instances symptoms were aggravated by the treatment. Reactions incident to treatment occurred most frequently in the patients who obtained the greatest amount of relief.

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#### CORRESPONDENCE

New Orleans, Feb. 26, 1925.

To the Editorial Staff,  
My Dear Friends:

Though I have verbally expressed to Drs. Walther and Talbot, and other members of your staff, my appreciation of the extraordinary favor shown me by the *New Orleans Medical and Surgical Journal*, in devoting so large a part of its editorial columns to my praise, on the occasion of my election to the Presidency of the American College of Surgeons, I realize the inadequacy of any verbal message to express my sentiment of grateful appreciation.

I now wish to confirm and emphasize, in a more permanent form, the sentiments of gratefulness and warm friendship that I entertain for your good selves,—for you, personally and individually, and for the *New Orleans Medical and Surgical Journal* as the object of your labor and enterprise. Your over generous praise has touched me deeply,—far more than I am able to express by any formal message of thanks.

This public manifestation of your approval, appearing at the end of forty-five years of an arduous professional life,—thirty-five of which have been devoted, in large part, to the teaching of medical students,—coming to me, as it does, from

men the majority of whom I may claim as my former pupils, and all as my friends and confreres,—fills me with a joy and gratitude that surpasses all the honors and distinctions that I have received in this country or abroad. In fact, none of these, no matter how highly prized, can possess any real importance or significance without the hearty approval and commendation of my professional fellows and the people with whom I have been associated all my life.

Whatever merit my professional career may possess, it is necessarily associated with the inheritance and the environment from which I have sprung, and, in this sense, I feel that whatever praise or honors are bestowed upon me, they properly attach to and are shared by the profession, the institutions and the community, of which I am only a part.

Allow me to add to my heartfelt thanks for all your kindness to me, a word of warm congratulation on the splendid success which the *Journal* has attained as the official organ of the State Medical Associations of Louisiana and Mississippi. The *Journal* is now one of the strongest pillars upon which the Parish and State Society rests. The activity and efficiency displayed in its editorial management, backed by a steadily increasing volume of contributions of a superior quality that reflect the progress accomplished by our medical societies, have given it a stability and a power that it never had before. As a former editor, interested collaborator, and contributor to its pages for the last forty years, I rejoice at your success, and I am the more pleased that so much of this success is due to the generous, brilliant and unselfish efforts of the younger men whom I am happy to recognize as my former students and always my friends. Cordially yours,

RUDOLPH MATAS.

# MISSISSIPPI STATE MEDICAL ASSOCIATION

## ANNOUNCEMENT OF ANNUAL MEETING

The fifty-eighth annual session of the Mississippi State Medical Association will meet in the First National Bank Auditorium, Biloxi, at 9:30, on the morning of May 12th, 1925, President J. J. Haralson presiding.

The first meeting of the House of Delegates will be at eight o'clock the same morning, Tuesday, May 12th. All local secretaries should send at once to the office of the state secretary and names of all accredited delegates so that there may be no confusion as to representation. This is important.

The Harrison-Stone Society and the profession of Biloxi are arranging an unusually attractive program of entertainment. Dinner-dances and boat trips out on the Gulf are among the things mentioned as "other than scientific."

During May the Gulf Coast is always at its best. The sun is not too hot to make boating and sea-bathing unpleasant. In fact, it is just right. If you have not experienced a plunge into the salt waters of Biloxi with the May breezes fanning you, you have in store a real treat and a happy surprise. If you want to fish Folkes will furnish you with a line and hook.

The scientific program has not been yet prepared for the printer, but will be in the May issue of the *Journal*.

A new State Board of Health will be nominated at this meeting, in accord with the recent Mississippi law governing the appointment of same.

Two national highways run through Biloxi, the old Spanish Trail and the Magnolia Route, so that it is easily accessible from any part of the state. Go in your car and fill it up with your professional neighbors. You will find the drives out of Biloxi the very finest anywhere.

The following are a few of the hotels of Biloxi: The White House, Buena Vista, Belmar, Avon, Biloxi, Kennedy, Riviera, Avelez. The Hotel Avelez will be headquarters. Make your reservations early as we will have four hundred at this meeting.

The average May temperature at Biloxi for a period of ten consecutive years is 75° F. This will give you an idea as to what kind of clothes to bring in addition to your bathing suit.

Plan to bring your wife with you. The

Woman's Auxiliary will have an interesting program, and many outing trips are planned for the ladies.

Headquarters, Avelez Hotel, Biloxi, Miss.  
General Meeting Place—First National Bank Auditorium

General Meeting—First Day

Tuesday, May 12, 1925

Session 9:30 a.m. to 12 m.; 1:30 p.m. to 4 p.m.

Opening Exercises

1. Call to order, President J. J. Haralson, Forest
2. Invocation . . . . . Rev. E. A. DeMiller, Biloxi
3. Report Committee on Arrangements.

## SCIENTIFIC PROGRAM

Evening Session—Tuesday, May 12, 1925

To Which the Public is Invited

First National Bank Auditorium

1. Invocation . . . . . Rev. O. S. Lewis, Biloxi
2. Addresses of Welcome:

On Behalf of the City of Biloxi—

Mayor J. J. Kennedy

On Behalf of the Harrison-Stone

Medical Society—H. M. Folkes, M. D.

General Meeting—Second Day

Wednesday, May 13, 1925

Session 9 a.m. to 12 m.; 1:30 p.m. to 4 p.m.

Wednesday Evening—Dinner-Dance, 7 p.m.

Buena Vista Hotel

General Meeting—Third Day

Thursday, May 14, 1925

Session 9 a.m. to 12 m.; 1:30 p.m. to 4 p.m.

Boat Ride

Section on Eye, Ear, Nose and Throat Will Meet at Hotel Avelez

Woman's Auxiliary Will Meet at the Hotel Riviera Tuesday, 10 a.m.

## PROGRAM OF SECOND ANNUAL MEETING OF THE WOMAN'S AUXILIARY OF THE MISSISSIPPI MEDICAL ASSOCIATION, BILOXI, MISS.

MAY 12, 13, 14, 1925

Tuesday, May 12:

8:00 A. M. Registration—Lobby of Avelez Hotel. Wives of doctors will be given opportunity of membership in the State Auxiliary by payment of the 1924-25 dues of \$1.00. (This privilege is extended only to those living in unorganized counties.)

3:30 P. M. Meeting of Executive Board—Sun parlor of Riviera Hotel, Mrs. D. J. Williams, state president, presiding.

Wednesday, May 13:

First Open Session—Mrs. D. J. Williams, state president, presiding.

9:30 A.M.—Call to order.

Invocation.

Address of welcome: On behalf of Woman's Auxiliary of the Harrison-Stone County Medical Society—Dr. Margaret Caraway, Gulfport.

On behalf of the City of Biloxi—Mrs. G. F. Carroll, Biloxi.

Response to addresses—Mrs. H. R. Shands, Jackson.

Roll call of state officers and councilors.

Roll call of auxiliaries.

Appointment of courtesy, resolution and nominating committees.

Report of councilors.

Report of treasurer—Mrs. W. D. McCalip.

Report of corresponding secretary—Dr. Margaret Caraway.

Report of secretary—Mrs. J. M. Acker, Jr.

Report of chairman public health—Mrs. Henry Boswell.

Report of county auxiliaries (report to be made by the president or delegate).

Address, "The Value of a Woman's Auxiliary to the County Medical Society," Dr. F. J. Underwood, Jackson.

12 O'clock—Adjournment.

12:30 P.M., Riviera Hotel—Mrs. H. S. Hairston, president-elect, presiding.

Report of meeting of Woman's Auxiliary of the American Medical Association, Mrs. S. W. Johnston, Vicksburg.

Report of organization of Woman's Auxiliary of Southern Medical Association, New Orleans, La.—Mrs. D. J. Williams.

(Guests of the luncheon on Wednesday and Thursday will make reservations at the registration desk.)

Wednesday, May 13:

2:00 P. M.—All members and visitors assemble on gallery of Riviera Hotel for a motor drive of 27 miles along the beach, stopping for tea at the picturesque "Inn-By-The-Sea," Pass Christian, Miss.

On return drive the guests will be given an opportunity to see the "Dixie White House," where Woodrow Wilson wintered, the Great Southern Hotel and other attractions in and near Gulfport, including "Beauvoir," the home of Jefferson Davis.

8:00 P. M.—Dinner-Dance—Buena Vista Hotel, Biloxi, for Medical Association and Auxiliary.

Thursday, May 14:

8:30 to 10:30—Sight-seeing in and about Biloxi.

10:30—Second Session, Mrs. S. W. Johnston, presiding.

Invocation.

Reading of minutes.

Report of Resolutions Committee.

Report of Courtesy Committee.

Report of Nominating Committee.

Election of officers.

Unfinished business.

Address—Dr. Henry Boswell, "How May Woman's Auxiliaries Assist the Sanatorium?"

12 O'clock—Adjournment.

12:30 P.M.—Luncheon—Mrs. C. A. Sheely, presiding.

2:00 P. M.—Boat ride for doctors and wives.

## MEDICAL ECONOMICS

*Chas. A. Bahn, M.D., Department Editor.*

### MEDICAL ECONOMICS

#### PART 8.

Are you essentially a doctor to the masses or a doctor to the classes?

If you are at heart a doctor to the masses, you really feel that all your patients are human beings like yourself—nothing more, nothing less. You believe that the hod carrier and the bank president are equals so far as your professional services are concerned. You think that your patients seek medical service primarily to get well and happy with a minimum expense of time and money; that your duty lies in the co-ordination of your knowledge of health, disease, and human beings, with the patient's health problem. You know that it is your duty to give every patient a big dollar's worth of real value in health restoration for every dollar that you charge, and thus, having earned your dollar, you realize that it is best for the patient and yourself that you be paid promptly because of every dollar that you earn, you receive only about forty cents net, which is necessary to keep you and yours in the present and future physical and mental health, comforts, and happiness, which is essential to serve efficiently those who need you. You feel that your real medical standing is proportionate to the number of persons that you efficiently serve. You realize that the more practically you conduct your practice, the more value you can give your patients, for that part of their income which is paid to you, because waste, extravagance and loss in medical practice must be paid for primarily by the doctor's family and patients, and at a very high rate. You gladly give a reasonable amount of your efforts to those who cannot pay, realizing, however, that where all do not pay equally, those who pay, must pay for those who do not pay.

If you are a doctor of the classes, you believe largely in personal service; you are essentially a one-man organization, everything from porter to president, to the smaller and possibly more select number of persons that you serve. Naturally, you have to draw presidents' salary for doing less technical work, which, unfortunately, has to be done. In other words, you don't believe in delegating the less difficult part of your work to others under your supervi-

sion and responsibility in order to save the patients time and money. You probably believe, that certain patients should have the right of way because of social and financial position, rather than because of medical emergency. Your charges are probably based more or less on what the traffic will bear, because you feel that certain patients are entitled to special privileges and naturally that they should pay for these privileges. You probably charge a large part of your earnings, because the class of patients you serve often do not transact their affairs on a cash and carry basis. The attendant cost of bookkeeping, etc., to say nothing of the loss sustained by unpaid bills, naturally have to be paid for by those who actually do contribute financially. Generally speaking, in medical practice, a dollar cash has the same value as a dollar and a half charged.

Of course, most of us do not entirely belong in one class or the other, but each of us has a distinct tendency in one direction or the other. It is important that you understand yourself.

The demand for the Rolls-Royce is just as legitimate as the demand for the Ford. One does not compete with the other, because they cater to entirely different buyers, between which extremes there are numberless gradations that, in principle, lean one way or the other.

Unfortunately our office practice is essentially conducted for the classes. It is rather difficult for the man with a family and an income of about two to four thousand dollars per year to get satisfactory office medical attention, if at all complicated without relatively great expense. Among the reasons are the rather great cost usually attended with medical practice at the present time, and medical buck passing. We are prone often to pass along from doctor to doctor our difficult medical problems, rather than work them ourselves as fully as possible, with a minimum time and expense to the patient. This is especially true, when the ailment is apparently purely functional, that is where an organic explanation is hard to find for the patient's symptoms. Someone has well defined an ophthalmic term, Amblyopia, "a condition in which the patient does not see, neither does the doctor."

In our varied and somewhat complicated

classification of disease, it is so easy to lose sight of the fact that many of our patients with purely subjective symptoms, not accounted for even by the most thorough objective examinations, are just plain tired. Their fatigue often results from circumstances beyond their control and often from prolonged incorrect physical or mental living.

Speaking about fatigue, did it ever occur to you that the first symptom of fatigue, and incidentally of most diseases, is, in one form or another, over sensitiveness and irritability? This often means that our mental machinery, working under forced draft, does not correctly interpret what our senses perceive. Our steering wheels are not keeping us in the middle of the road and our brains make mountains of mole-hills, and the reverse. Each of us has a fatigue point beyond which we will break down in one form or another.

Our neurasthenic patients are very often fundamentally normal persons like ourselves, who are paying for their faulty living and lack of understanding in pain and physical limitation in one form or another. Because we cannot see, hear, nor feel the cause of pain or other disfunction, it does not follow that they do not exist.

When we are tired our jobs are too big for us. It is especially at that time that fatigues, side partners, *fear* and *worry*, sap vitality? These are indirectly the greatest causes of disease and ill health. When we are healthy and happy, most diseases do not attack us. Our immunity is at its greatest.

The old idea of working very long hours in fundamentally wrong. It is just as necessary to stop work on time as it is to start on time, the important thing is to really work when you work and play when you play. If you cannot do a day's work in eight hours you probably cannot do it at all. The person who dissipates in play is probably really better off than one who dissipates in work, because the former is at least more rested.

As physicians, our primary duty is to

teach others how to live, and unless we are healthy and happy this is impossible. That this thought is as old as time is proven by the time-aged adage, "Physician, cure thyself."

Drugs never have, and never will take the place of corrective living. Think that over.

It is, therefore, of prime importance, Mister Doctor, that you keep healthy and happy, because otherwise you cannot perform your full duty. One cannot teach others to do what one really does not know how to do by actual practice.

Ask yourself these questions; am I over sensitive or irritable in other words, am I probably tired? This often means that you do not know how to live, because if you did, you probably would not buy pain, ill health, and limitation, with your life's blood any more than you would lead nickels with your dollars.

To be a really successful physician, you must be healthy and happy because you are selling health and happiness. You must be a producer and not a parasite, physically, mentally and morally. To accomplish this, you must conduct your practice in a reasonably practical way in order to provide for the rest, healthy recreation, and play which is just as necessary as work. You must be saving enough to provide for you and yours when the sun goes down and the public has ceased, as ultimately it must, to buy the knowledge and service which you have for sale.

In order to earn net a thousand dollars a year in the practice of medicine, generally speaking, you will have to charge, on an average, one dollar per hour for your time. Thus, if you expect to earn ten thousand dollars per year net, you must make your time worth, on an average, ten dollars an hour to the patient who has to work for his income, probably as hard as you do for yours.

Address all communications to Dr. Chas. A. Bahn, 1551 Canal St., New Orleans, La.



## NEWS AND COMMENT

*Lucien A. Ledoux, M. D., Department Editor*

"Every man owes some of his time to the up-building of the profession to which he belongs."—Theodore Roosevelt.

### LOUISIANA STATE MEDICAL SOCIETY MEETING

Our president, Dr. C. V. Unsworth, has asked that it be announced that all meetings of the House of Delegates, also the meetings of the Scientific Session of the Convention will be called to order on time as specified in the program. Your co-operation in this regard is earnestly requested, so that the sessions of the House and the Scientific Session may not be delayed and will be completed as planned.

As you will observe, we have a very large program, and it will be only by strict punctuality and adherence to time limits of papers and discussions that we will be able to complete same.

### PLAN OF ENTERTAINMENT

Tuesday, April 21, 1925—Luncheon, 12:00 p.m., Hotel Dieu.

Thursday, April 23, 1925—Luncheon, 12:00 p.m., Tulane Medical College.

Tuesday, April 21st, 1925, 8:00 p.m., Elks' Home.

President's Address—Dr. C. V. Unsworth.  
Annual Orator.

A dance will follow. This is tendered by the local profession to the membership of the Louisiana State Medical Society. The Committee on Arrangements again urge the out-of-town members to bring their wives and daughters. The dance at the Elks will be a gala occasion. It will furnish the means of a social "get-together."

Wednesday, April 22nd, there will be a stag smoker. A modern Lucullus—in the person of Paul Gelpi—is a positive guarantee that the heavens, sea and earth will be made to contribute their share in making this function a memorable one.

With the record-breaking attendance of the recent Southern Medical Association still fresh in our minds, we expect the State Society meeting of 1925 to be a red letter year in its history.

### HOTELS

The Roosevelt Hotel will be official headquarters for the Louisiana State Medical Society Convention.

### HEADQUARTERS

Tulane Medical School, 1551 Canal Street, Hutchinson Memorial. (Walking distance from any of the hotels).

All mail addressed in care of Convention will be taken care of at Registration Office; and a daily notice will be posted of letters and telegrams received.

Information Bureau in Registration Office.

All those desiring to contribute scientific exhibits for the Annual Meeting of the Louisiana State Medical Society should get in touch with Dr. Foster M. Johns, chairman. Your prompt attention is earnestly requested.

### MONTHLY BULLETIN OF THE SHREVEPORT MEDICAL SOCIETY, MARCH

March meeting of the Shreveport Medical Society, March 3rd, at Charity Hospital, at 8 p.m. "Let us know each other better."

### MARCH SCIENTIFIC PROGRAM

Adenoids and Tonsils in Relation to General Health, by Dr. E. C. Simonton. To open discussion, Drs. Boaz, L. W. Gorton, Picard.

Clinical Case, Dr. D. L. Kerlin.

Clinical, Dr. W. J. Norfleet.

Charity Hospital, February 3rd, 1925.

The Shreveport Medical Society was called to order at 8:05 by President Sanderson. Fifty members were present.

Minutes of the last meeting were read and approved.

For the Memorial Committee Dr. J. D. Young read the resolutions drawn up by his committee commemorating the death of Dr. W. M. Adams, who died on January 29th, 1925. A report was made, seconded and passed, that the resolutions be adopted by the Society and the resolutions spread upon the minutes of the Society and a copy be sent to the family of the late Dr. Adams.

Dr. Sanderson reported a talk he had with the director of the Shreveport Federated Charities. A motion was made, seconded and passed, that the Society participate in the work. Cards were distributed for pledges.

Written applications were received from Drs. S. H. Betts, D. R. McIntyre, and G. W. Murphy, each accompanied with six dollars for 1925 dues. These applications were referred to committees as follows: Drs. Crain, Ragan, Knighton on Dr. Betts' application; Drs. Hendrick, Lloyd and Douglas, on Dr. McIntyre's; Dr. J. D. Young, Abramson, Stamper, on Dr. Murphy's application.

### SCIENTIFIC PROGRAM

The Society was extremely fortunate in having Dr. Victor C. Vaughan, past president of the American Medical Association and a member of the International Health Board, address us. Dr. Vaughan's subject was Notable Achievements of the Medical Profession During 1924.

Following the address Dr. Vaughan was given a rising vote of thanks.

Discussing Dr. Vaughan's talk were Drs. Sanderson, Herold, Winn, Lucas, Bodenheimer, Rougon, Thomas, Caldwell, Barrow and Scales.

Under clinical cases Dr. Boyce presented a case showing an especially large tumor mass of the neck with a microscopic section diagnosis of spindle cell sarcoma, duration one year and showing no metastasis. Discussion by Dr. Barrow.

On motion the Society adjourned, after one of the most interesting meetings we had had.

ROBT. T. LUCAS, Secretary.

### TERREBONNE PARISH MEDICAL SOCIETY

Terrebonne Parish Medical Society recently

held a meeting, at which time the following officers for 1925 were elected:

President, Dr. R. W. Collins, Houma; vice-president, Dr. J. B. Duval, Houma; secretary-treasurer, Dr. P. E. Parker, Houma; delegate, Dr. T. L. St. Martin, Houma; alternate, Dr. H. P. St. Martin, Houma.

#### VERMILION PARISH MEDICAL SOCIETY

The Vermilion Parish Medical Society on March 3rd elected the following officers for 1925:

President, Dr. H. A. Eldredge, Abbeville; vice-president, Dr. Thomas Latiolais, Kaplan; secretary-treasurer, Dr. A. Landry, Delcambre; delegate, Dr. Thomas Latiolais; alternate, Dr. A. Landry.

#### WASHINGTON PARISH MEDICAL SOCIETY

The Washington Parish Medical Society held its February meeting at the Pine Tree Inn, Bogalusa, February 26th, 1925.

Luncheon was served from 8:00 to 9:00 P. M., after which the meeting was called to order and the regular order of procedure followed.

The scientific program consisted of the following papers and discussions, viz:

"Gastric Ulcer Perforating," by Dr. E. E. Lafferty. Discussion opened by Drs. Roberts and Herrin.

"Pyelitis," by Dr. R. R. Ward, Bogalusa. Discussion opened by Drs. Stringfield and Davidson.

"Water and Health," by Dr. F. Michael Smith. Discussion opened by Drs. Slaughter and McNeese.

#### TANGIPAHOA PARISH MEDICAL SOCIETY

The monthly meeting of the Tangipahoa Parish Medical Society was held at Amite, Louisiana, Monday, March 9th, at 8 p.m.

The scientific program was preceded by a supper, which was served at Thompson's Cafe, with Dr. E. M. Robards, president, presiding, and Dr. Alfred Lewis, secretary. The program contributed by the invited guests was as follows:

"Some Comments Regarding Present Day Obstetrical Practice," by Dr. Lucien LeDoux, New Orleans.

"Amebic Dysentery and its Treatment with Stovarsol," by Dr. Foster M. Johns, of New Orleans.

A short business session followed. The application of Dr. E. Kittering, of Loranger, Louisiana, was submitted, and the applicant elected by acclamation.

Before adjourning, Ponchatoula was chosen as the next meeting place, at which time the annual election of officers will be held.

#### AMERICAN COLLEGE OF SURGEONS

A sectional meeting of the American College of Surgeons was held in Mobile, Alabama, on February 13-14, at which the states of Alabama, Florida, Georgia, Louisiana and Mississippi were represented. The first day was devoted to the discussion of Hospital Standardization and Hospital Problems. The hospital standardization movement was presented by Dr. Allen Craig, of Chicago, director of state and provincial activities, American College of Surgeons; Hospital Efficiency, from the standpoint of the Internist, by

Dr. Lee W. Roe, Mobile, Ala., senior Internist of the City Hospital, representing the American College of Physicians; The Patient, the Doctor and the Hospital, by Rev. C. E. Moulinier, Milwaukee, president of the Catholic Hospital Association of America; Some Things that Hospital Standardization has Accomplished, by Arch C. Cree, general superintendent Georgia Baptist Hospital, representing the American Protestant Hospital Association.

The conference on hospital standardization was presided over by Dr. Edgar P. Hogan, of Birmingham, Alabama.

A Round Table Conference was conducted under the chairmanship of Dr. M. T. MacEachern, of Chicago, director hospital activities, American College of Surgeons, in which the leading representatives of the most important hospitals and medical institutions of the Gulf States participated.

On the evening of February 13th, a public meeting was held, Dr. E. P. Hogan presiding, which crowded the Scottish Rite Cathedral with a large, select and most representative audience. Addresses were delivered by Dr. Allen Craig, of Chicago, on "The American College of Surgeons and the Public;" by Dr. M. T. MacEachern, of Chicago, on "Efficient Hospitals,—Illustrated;" by Dr. W. C. MacCarty, pathologist of the Mayo Clinic, Rochester, Minnesota, on "What You Should Know About Cancer," and by the Reverend C. E. Moulinier on "The Healing of the Sick."

The exercises were closed by a most interesting series of motion pictures under the heading, "How the Fires of the Body are Fed."

The meeting was a great success,—addresses and exhibits were much appreciated by the audience.

The social side of the conference was no less delightful and included a most enjoyable boat ride and delicious luncheon. Too much praise cannot be given the committee in charge of all arrangements,—scientific and hospitable,—to whose personal efforts the success of the gathering is largely due.

Among the Louisiana and Mississippi physicians in attendance upon the conference, the following were noted:

Drs. Matas, Urban Maes, C. G. Cole, J. R. Spellman, R. E. Stone Lynch, New Orleans; Dr. J. C. Willis, Shreveport; Dr. L. B. Crawford, Patterson; Dr. J. L. Wilson, Alexandria; Dr. J. U. Graves, Monroe; Dr. J. B. Chamberlain, Baton Rouge. Of Mississippi—Dr. W. B. Dobson, Dr. H. R. Shands, Dr. J. W. Barksdale, Dr. A. E. Gordon, Dr. David Walley, Dr. W. W. Crawford, Dr. Chas. Chamberlain, Dr. B. B. Martin, Dr. P. H. McLean, Dr. E. C. Parker, Dr. H. A. Gamble, Dr. S. H. Hairston, Dr. C. C. Hightower, Dr. L. B. Hudson.

On the evening of Monday, March 2, 1925, a lecture was delivered by Dr. Rudolph Matas in Cincinnati by invitation of the Academy of Medicine of that city under the presidency of Dr. John Chapman Oliver.

The subject of the address was "Immediate and End Results in the Operative Treatment of Aneurisms by the Author's Methods (Endoaneurismorrhaphy)." The lecture being profusely illustrated with lantern slides, might have been designated as a Stereopticon Clinic on Aneurism.

There was a large attendance of distinguished

members and representatives of the medical profession and their appreciation of the lecturer was shown by a rising vote of thanks.

#### ILLINOIS CLINICAL CLUB

A group of physicians and surgeons, residing in Springfield, Illinois, and its vicinity, visited in New Orleans on Monday, March 9th, and remained in the city until the following Wednesday afternoon. The party consisted of about thirty medical men and women, under the leadership of Dr. Don Deal and Dr. C. P. Sloan, of Bloomington, Illinois. Arrangements for the reception of the club in New Orleans had been made by Dr. Rudolph Matas.

On Monday, after visiting Charity Hospital and later enjoying the historic features of the vieux carre, they were entertained by the Orleans Parish Medical Society, where the privileges of the floor were given to the visitors. On Tuesday, they were entertained at Touro Infirmary, witnessing operations in the morning, in which all the members of the surgical staff participated, and after luncheon in the afternoon were kept busy with an excellent medical program under the direction of Dr. I. I. Lemann. On Wednesday, they visited Hotel Dieu, where an excellent medical and surgical program was prepared by the staff, under the direction of Dr. Homer Dupuy. Wednesday evening the visitors were entertained at a supper given by Dr. J. T. Nix, Jr., at the Nix Clinic.

#### AMERICAN HEART ASSOCIATION

The first annual meeting of the American Heart Association was held at the New York Academy of Medicine, Monday afternoon, February 2nd, 1925. Dr. Lewis A. Conner, the president, reviewed briefly the progress of the development of the Association and commented on the need for such an organization and the widespread interest which its formation had developed.

At a meeting of the Board of Directors immediately following the annual meeting, the following officers were elected:

President, Dr. Lewis A. Conner; vice president, Dr. James Herrick; secretary, Dr. Robert H. Halsey; treasurer, Dr. Paul D. White; executive secretary, Miss M. L. Woughter.

#### RADIO SERVICE FAR REACHING

For three years the Public Health Service has operated a Health Information by Radio Service, consisting of weekly lectures on timely health topics. A total of forty-seven stations are now co-operating in this work.

Surgeon-General Cumming was agreeably surprised recently to receive a letter from the chairman of the Health Week Committee of Jerusalem, Palestine, which read in part as follows:

"Several of your talks on public health which were prepared for broadcasting were made use of during our recent health campaign. In the name of the Executive Committee of Health Week, I wish to thank you for these talks, which are very instructive."

The "Truth Serum" (scopolamin-apomorpha) is a success, it is claimed at the convention of the Eastern Society of Anesthetists. This drug, to make the people tell the truth whether they want to or not, is a humane form of third degree.

The maternal death rate among the industrial policy holders of the Metropolitan Life Insurance Company declined during 1924, according to the company's statistical bulletin. Deaths from puerperal septicemia or child-bed fever dropped to 6.6 per 100,000, the lowest figures ever recorded for the women insured in the company's industrial department. The declining death rate from this disease is due to some extent, at least, the report states, to more and better nursing before and after confinement and to better delivery service in the hospital and home.

The National Committee for Mental Hygiene has added two new medical members to its staff, Dr. George K. Pratt, as assistant to the medical director, and Dr. Ralph P. Truitt, as director of the division on the prevention of delinquency, to succeed Dr. Victor V. Anderson, resigned.

Whooping cough causes a greater number of deaths in Denmark than any other infectious disease. Danish physicians and scientists therefore have devoted much time to the study of this disease. Dr. Thorwald Madsen, of the Danish Serotherapeutic Institute, lecturing at Harvard, said that the institute has perfected a means of establishing a diagnosis of the disease in its early stages. Its studies have also show that after five or six weeks practically no whooping cough bacilli are found. As a result, Danish children are now kept from school only four weeks after the beginning of the spasmodic cough. A whooping cough serum was found to have little preventive effect, but vaccination was found to lighten the infection and decrease the mortality to a considerable degree.

Mexico will soon establish a Federal Children's Bureau with local branches throughout the country, according to the provisions of a recent decree.

#### THE AMERICAN BOARD OF OTOLARYNGOLOGY

The American Board of Otolaryngology will hold its first examination during the meeting of the American Medical Association in Atlantic City, May 25th to 28th.

According to the rules of the Board, applicants are divided into three classes.

Class I. Those who have practiced Otolaryngology ten years or more.

Class II. Those who have practiced Otolaryngology five years and less than ten years.

Class III. Those who have practiced Otolaryngology less than five years.

The type of examination is different for each class. The secretary, Dr. H. W. Loeb, announces that thus far over three hundred applications have been made.

#### AMERICAN SOCIETY FOR THE CONTROL OF CANCER

Annual Meeting, March 7, 1925

The date for holding the annual meeting is fixed by law as the first Saturday in March. This falls on March 7. The meeting will be held in the offices of the Society, 370 Seventh Avenue, 16th floor, at 4 o'clock in the afternoon.

## PUBLICATIONS RECEIVED

Lea & Febiger, Philadelphia and New York: "A text-book of Practical Therapeutics," by Hobart Amory Hare, B. Sc., M. D., LL. D. "William Crawford Gorgas, His Life and Work," by Marie D. Gorgas and Burton J. Hendrick.

W. B. Saunders Company, Philadelphia and London: "Principles of Surgery for Nurses," by M. S. Wolff, MA., B. Sc., M. R. C. S. (Eng.), L. R. C. P. "The Physiology of Mind," by Francis X. Dercum, A. M., M. D., Ph. D. "The Surgical Clinics of North America," December, 1924, Vol. 4, No. 6.

F. A. Davis Company, Philadelphia: "Feeding, Diet and the General Care of Children," by Albert J. Bell, A. B., M. D. "Clinical Medicine for Nurses," by Paul H. Ringer, A. B., M. D. "Clinical Therapeutics," by Alfred Martinet, M. D. "A Laboratory Manual of Physiological Chemistry," by Elbert W. Rockwood, M. D., Ph. D., and Paul Reed Rockwood, M. D. "Pseudo-Appendicitis," by Thierry DeMartel and Edouard Antoine.

C. V. Mosby Company, St. Louis: "The Technic

of Local Anesthesia," by Arthur E. Hertzler, A. M., M. D., Ph. D., LL. D., F. A. C. S.

Paul B. Hoeber, Inc., New York: "Association for Research in Nervous and Mental Disease," Vol. III, 1923.

The MacMillan Company, New York: "Medical Education," by Abraham Flexner.

The Year Book Publishers, Chicago: "The Practical Medicine Series," Vol. IV, Pediatrics, edited by Isaac A. Abt, M. D.

Miscellaneous: "International Conference on Health Problems in Tropical America, 1924." "Consultations du Medecin Practicien," by Le Dr. Fred Blanchod.

## REPRINTS

"The Intensive Radiotherapy of Cancer, Is It a New Method?," by A. Joseph Riviere, M. D., Paris. "An Oriental Bacteriologic Research on Pruritus of the Perineum," by J. F. Montague, M. D. "Des Nodosites Juxta-Articulaires," by E. Jeanselme.

## Notice

The New Orleans Ophthalmological and Oto-laryngological Society will hold clinical meeting on April 23rd at 8:00 P. M. The different eye, ear, nose and throat doctors of New Orleans will present cases, and a most interesting program will be provided. Those interested in these specialties are cordially urged and invited to attend.

The meeting will be held at the Eye, Ear, Nose and Throat Hospital.

DR. JULES DUPUY, Chairman of Meeting.

DR. VAL FUCHS, Secretary.

DR. T. J. DIMITRY, President.

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**NEW ORLEANS**  
**MEDICAL AND SURGICAL**  
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Owned and Published by THE LOUISIANA STATE MEDICAL SOCIETY

OFFICIAL ORGAN MISSISSIPPI STATE MEDICAL ASSOCIATION AND ORLEANS PARISH MEDICAL SOCIETY

\$2.00 per Annum, 25 cper Copy  
Volume 77, Number 11

MAY, 1925

Published Monthly in New Orleans  
at 1551 Canal Street

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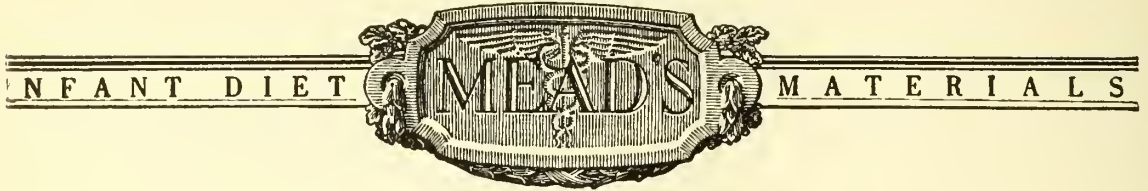
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# New Orleans Medical

and

# Surgical Journal

Vol. 77

MAY, 1925

No. 11

## VERSION VS. FORCEPS\*

LUCIEN A. LEDOUX, M. D.,

*Visiting Obstetrician,*

*Charity Hospital*

NEW ORLEANS.

During the past two or three years, there has been a noticeable change in attitude in regard to internal podalic version.

This operation was formerly restricted to a few indications and considered more in the nature of an emergency operation or means of last resort. The work of Dr. I. W. Potter<sup>1</sup> of Buffalo, and the studies of Dr. William Sharp, of New York<sup>2</sup>, in the intracranial lesions of the new-born, have stimulated interest in the subject, broadened its indications and popularized its use particularly among obstetricians. The former has given us a simplified technique, far better in my experience than any described in our current text-books, while the latter has opened up a very fertile field for thought and study. As forceps, and version and extractions are the operations most frequently resorted to, we have for the past several years, in our service in the Charity Hospital, been carefully studying the immediate and end results.

Occasions arise wherein we must decide which of these two procedures will most adequately meet our needs and the decision is usually based on accepted indications and is influenced by the judgment of the operator and his experience with the two methods.

As this is a big subject, I wish to limit myself to a brief review, based on our experiences, of the merits and demerits of these two operations—especially as regards injuries to the mother and fetus and fetal mortality. Successful delivery by these two methods depends in a large measure on

the proper interpretation of the indications and regard for the mechanics of the second stage.

As to the use of forceps, in spite of the universal condemnation of the high forcep operation, based on the experiences of our best accouchers, we find that it is still being practiced, with the usual disastrous results to mother or fetus, or both.

The mid-forceps has met all requirements satisfactorily. Its use should be encouraged, and early when indicated, except in the cases listed below.

The low forceps, with or without episiotomy has been most valuable. Securing a proper application of forceps is rudimentary, but failure to determine the exact position and amount of rotation coupled with an apparent disregard for the mechanics of the second stage, especially extension, leads us into difficulties. The forceps frequently slip off, often after repeated applications, with resultant tears of the perinium, vaginal wall and cervix, with cystocele and rectocele as later complications.

The fetal head is severely traumatized, resulting in injuries varying from contusions of the brain, edema, and intra-cranial hemorrhage, to gutter fractures of the skull.

These are but a few of the accidents, but represent the most serious as regards the life of the fetus and its future welfare.

Death results from prolonged compression of the head by the forceps, or by forcing the head against the bony prominences with resultant compression sufficient to cause the injuries just mentioned. With proper asepsis, the danger of infection is very small, and the maternal mortality should be practically nil—but on the other hand, the fetal mortality is high.

Jellett<sup>3</sup> states that a fairly correct idea of the risks of forceps operations when properly performed in hospital practice, may be afforded by the following table:

\*Read before the Louisiana State Medical Society, Opelousas, La., April 21-24, 1924.

Del	Forceps	Maternal	Fetal	% Fetal Deaths per 100 cases
11,098	431	0	60	13.92%

This percentage is high and is fairly representative of the figures submitted by recognized clinics.

Internal podalic version and extraction have supplanted the use of forceps in many cases,—particularly those of difficult application or in instances where the forcep extraction does not progress satisfactorily. I refer especially to cases of occipito-posterior positions, neglected face presentation, premature ossification of the cranial bones with or without closure of the posterior fontanel and excessive overlapping of the cranial bones. The application of forceps in these types of cases will invariably result either in a cerebral hemorrhage or edema, the degree varying and depending on the ease or difficulty of delivery.

Potter states that in a series of 938 cases, he had no maternal mortality. The percentage of fetal deaths in these deliveries, exclusive of other causes, such as macerated or dead feti or babies whose cord did not show any pulsation when delivery was started, was 2.3%. I regret my inability to present a statistical report on the causes of death following delivery by version. Autopsies are always requested, and usually refused, but in the ones obtained we noted a high percentage of deaths due to syphilis of the lung and congenital atelectasis.

The dangers of the operation to the mother, are lacerations of the cervix, (frequent), rupture of the uterus, (remote), infections, and lacerations of the perineum, more often than not, very extensive. The latter can be offset by carefully dilating the soft parts, prophylactic low forceps, episiotomy and complete anesthesia. The dangers to the fetus are asphyxia from aspiration of fluid or mucus, or compression of a prolapsed cord, fractures of the vertebral column, clavicle or arms, and we might add, intra-cranial hemorrhage or edema from the faulty handling of the terminal stage of delivery.

Occasionally it is impossible to determine the position due to a caput succedaneum, cephalematoma, or apparent impaction. This interferes with a proper application of forceps and if applied they frequently slip off. Attempts at delivery in these types of cases are discouraging, and here we have employed version, not after repeated attempts at delivery, but immediately after the first failure

to secure a satisfactory application. I have not enumerated all the indications for forceps and version but have stated the most frequent cases in which, in our experience it has proven its worth.

Attention to detail and meeting step by step the developments of the delivery, has made it in our hands a comparatively simple operation, free from the hurry and haphazard steps often stated as necessary to a successful delivery. In preparing for this operation, the patient in addition to being surgically prepared externally is given an enema and is catheterized under anesthesia so as to better empty the bladder. We have used ether, chloroform and nitrous oxide. The former is the safest, chloroform has been employed particularly in cases requiring a quicker relaxation. Nitrous oxide has also been used, especially in eclamptics, but its use should be limited to the skilled anesthetist or the relaxation will be insufficient and unsatisfactory.

The technique we employ is the one described by Potter, in the March, 1921, issue of the *Journal of Obstetrics*.<sup>1</sup> We vary it in some respects, viz:—no attention is paid to ironing out the vaginal rugae, manual dilatation of the perineum to a point allowing of the free passage of the closed fist is deemed sufficient. If the membranes are not ruptured, they are artificially opened. We do not attempt to preserve the bag of waters or separate the membranes from the uterine wall. The former is of little assistance, in fact may be embarrassing at times, with the latter there is always danger of adding to the risk of infection.

The patient is anesthetized to the surgical degree before even attempting to dilate the perinium and this dilatation is usually accomplished with the left hand, the right being reserved for the intra-uterine examination and version. Later the left hand is used to steady the fundus, the right hand is introduced far into the uterus, both feet are grasped and extracted. What actually follows is that the fetus goes through the movements of a backward somersault.

As we are working inside of the membranes, the danger of infection is at a minimum. We usually follow the delivery by a manual extraction of the placenta, as the patient is asleep and the uterus tends to relax. Three minims of pituitrin are immediately given, followed by a massage, and ergot as soon as the patient has reacted. The forceps are always ready to be applied to the aftercoming head. This has been particularly useful in cases when there

is need for haste as indicated by diminishing cord pulsations, a large head and in primipara with rigid perineum. The operation has been performed satisfactorily in hospital and practice in the homes. All that is required is a complete knowledge of technique.

As compared to high forceps, and the mentioned cases in which in my opinion mid-forceps should not be used, it is an easier and safer method of delivery and can be readily mastered with a little practice.

### Conclusion

I want to state that I am not advancing the discarding of forceps in favor of version. Version should be substituted for high forceps and used in many mid-forceps indications. It should be done early, not simply as an emergency or operation of last resort. The routine termination of labor at the end of the first stage with version, is a practice that should be discouraged.

Finally, while the danger to the mother may be slightly greater with version, when properly performed it will be more satisfactory from the maternal and fetal viewpoint, not only in respect to the immediate results, but as regards the eventful welfare of both.

### References:

- (1) *The Place of Version in Obstetrics*—I. W. Potter, M. D., 1922.
- (2) *Intra-Cranial Hemorrhages in the New-Born*—William Sharpe, M. D., J. A. M. A., Vol. 81, No. 8.
- (3) *Manual of Mid-Wifery*—Jellett and Modill, Univ. Series.
- (4) *Journal of Obstetrics*—I. W. Potter, M. D., March, 1921.

### DISCUSSION

Dr. Thomas B. Sellers: I agree with Dr. LeDoux in condemning high forceps. In spite of the fact that high forceps are almost a relic in maternity hospitals some surgeons still use them.

As an anaesthetic, I prefer nitrous oxide and oxygen to ether when the services of a trained anaesthetist can be had. One of the advantages of nitrous oxide and oxygen is that the patient will awaken quickly.

Great care must be exercised in performing a version. Less attention should be paid to the time it takes to deliver the child, and more attention paid to the prevention of shock to the mother, and bodily injury to the child through haste. In delivery of primipara—a routine episiotomy is an excellent practice. It prevents injury to the child and makes delivery of the head much easier.

Dr. C. C. De Gravelles (Morgan City): I want to thank the Doctor for his really wonderful paper, and I am sorry there are not more here to hear it.

I heard a very prominent gynecologist from

New Orleans say in discussing this general subject, "Who is using the high forceps these days?" But we all know that they are being used too often. A lot of doctors buy a pair of forceps and do not like to look at them; they think they have to use them, and they use them too often. The statistics last year of Columbia Hospital in Washington, D. C., showed that 20 per cent. of deaths of infants in the first month of life are due to birth injuries; the statistics of the Maternity Hospital of New York showed 15 to 20 per cent. This strikes me as a terrible condition, and I believe the time is coming when the manufacturers of instruments will make forceps that we cannot get past the vagina.

Dr. Paul Michinard (New Orleans): It has been said that fetal injury and fetal death, maternal injury and maternal death, have been caused by both high forceps and podalic version. Injury and death have been caused by the scalpel. All of these methods with the intention of relieving mankind have to be put aside sometimes because there is a lack of skill and judgment in their application. I consider forceps a perfectly safe instrument. Some have contended it is a fetal murderer. It is in the hands of the man who does not know why and how he uses the instrument. Podalic version may also be condemned. I have been called in consultation in several cases of serious puerperal infection caused by podalic version. Three I remember distinctly—when I made examination I found the infection was due to laceration of the lower segment of the uterus, a laceration, fortunately for the patient, in the broad ligament. It was not podalic version as a method that was causing this distressing result, but simply the wrong application of a very good method.

What are the indications for these procedures? I cannot tell you unless you know your anatomy. I have no use for this haphazard way of taking obstetric cases. I refuse to take an obstetric case unless I have ample opportunity of making pelvic measurements. I do not make external pelvic measurements, but internal. We must take not only the antero-posterior diameter of the inlet, but also the diameter between the spines of the ischia, which should be 11 cm. That can be easily determined by taking the diameter between the tuberosities of the ischial bones. It is the same diameter of the spine of the ischium, provided there is no deformity of the pelvis. If there is deformity you will find the difference. Then your attention is called to the fetal head at mid-plane. That is where we generally apply our forceps, and that is where with forceps, if the diameter is less than it should be, that you do cerebral compression, and naturally cause fetal death.

The basis of this thing is pelvic measurements. Next you should ascertain the size of the fetus, and you can generally do that without the aid of the X-ray. Having these two facts well in hand, then you can determine beforehand as to whether you will do a podalic version or apply forceps. An attempt to produce podalic version after the head has passed the pelvic brim is absurd. You can hardly get the hand back into the pelvis—once in a while you can do it.

Doctor LeDoux is perfectly correct when he says do not persist in your forceps application. If you fail at one time, and the head is engaged, then go to your podalic version. I do not believe any sane man today would try to apply forceps above or at the pelvic brim.

Dr. Lucien A. LeDoux (closing): I want to

thank Doctors Sellers and Michinard for their remarks in regard to version. Doctor De Gravelles need not have designated the country doctor. In the city of New Orleans in the past ten days I have seen two cases of attempted high forceps extraction. Fortunately, they were not done by obstetricians.

The principal reason for bringing up this subject is that until recently very little work has been done in the way of studying the intra-cranial lesions of the newborn. Sharpe of New York in studying 100 cases at autopsy found intra-cranial oedema or hemorrhage in 9 per cent. There were no version cases listed in this series. Five per cent were from high forceps; 4 per cent were from prolonged labor.

This is one of the most important subjects that we have to deal with now, and I regret that it was not discussed by the neurologists and pediatricians.

Except in severe cases we are seldom able to make a diagnosis unless we resort to spinal puncture. Cases are usually diagnosed at about seven or eight months of age.

It appears that in the cases we have listed many benefits would be derived by substituting version for high forceps and many mid-forceps applications and I am sure after familiarizing himself with the technique both patient and physician will be greatly benefited.

## VALUE OF DIATHERMY TO THE GENERAL SURGEON\*

H. W. E. WALTHER, M. D.

AND

C. L. PEACOCK, M. D.

NEW ORLEANS.

That form of thermotherapy obtained through the use of diathermy is designated conversive heat. It is heat generated within the tissues of the body, by the passage of d'Arsonval current from one electrode to another, and is administered in so bland a manner and with such gradation as to eliminate all possibility of shock or trauma. The maximum point where the heat is generated is not on the body surface but somewhere in the tissues between the two electrodes and can be regulated by varying the size of these applicators. The older methods for applying heat brook no comparison with modern scientific apparatus which, in the hands of those skilled in its operation, can utilize a long-sought-for thermal agent to most any degree, on any part of the body, which is clean, sure, safe, without discomfort to patient and producing results in one-tenth of the time formerly required. While physiotherapy as a whole has been allotted to a special field, it is daily becoming more apparent that neither specialist nor general practitioner can willfully ig-

nore the aid to treatment that this branch of medicine offers.

It is necessary that one have some working knowledge of electricity before electrotherapy can be administered efficiently. High frequency may mean one thing to the electrician and another to the physician. The former may speak of high frequency at 500 interruptions per second while the latter will not consider anything under 30,000 --this being the minimum at which human tissues ceases to respond by contracture. More often however medical high frequency goes well into the 100,000 or even into the millions. We consider a machine putting out 800,000 interruptions as one that will give good results provided the voltage is sufficiently high to drive the amperage through. A machine with a voltage above 30,000 is to be preferred.

The definition of d'Arsonval current is given by most texts as being a bipolar current of high frequency, high milliamperage and relatively low voltage. The amperage holds only when speaking of medical electricity and is not to be confused with the idea of the electrician who probably considers high amperage when in the hundreds. The most frequently used currents for comparison are the Tesla and the Oudin, the latter being unipolar, of low milliamperage and high voltage. In diathermy from 200 to 4,000 milliamperes are used. With this milliamperage, the right frequency and sufficient voltage, we have an agent that will serve as a valuable adjunct to treatment. To understand thoroughly the rationale of high frequency therapy it is absolutely necessary that one obtain a working knowledge of the fundamentals of electricity. These are best obtained from text books dealing with electricity in its application to medicine, on induction, beginners electricity, etc. One should know the difference between direct and indirect currents, the ampere, the volt, the watt, the ohm; electron, ion, cation, anion, etc.; and the make up of the machine, the method of induction, the current and its application.

The different tissues react differently in their resistance and conductive power to the flow of electric current. The skin offers little resistance and it a good conductor, fascia is less resistant and gives better conduction and muscles offer great resistance and are good conductors. The blood and lymph vessels offer varying degrees of resistance and conductivity, bone structure is a good conductor and has great resistance and fibrous tissues offers greater resistance than any other. This phenome-

\*Read before Orleans Parish Medical Society, January 26, 1925.

non in fibrous tissue is due to the lack of blood and lymph vessels and also to its compact structure which, fortunately for us, heats up faster and holds heat longer than normal tissue. That such tissue, if of recent formation, can be made to disappear by diathermy we have established beyond a doubt. Even if the scar be old it can be softened up, stretched, and with subsequent massage, will be found to become absorbed to a marked degree.

When sufficient voltage is used to force the current through the parts under treatment we observe one of the laws of electricity contradicted, namely a flow of current from electrode to electrode regardless of the resistance offered, the axiom being that currents of electricity follow the paths of least resistance. This is only applicable to high frequency with relatively high voltage and d'Arsonval current from a modern machine. One outstanding feature of diathermy is its positiveness in relieving the pain of acute congestion. This relief is accomplished without injury to tissue and is permanent in the majority of instances, a feature sufficiently attractive to warrant its employment by the surgeon.

We have used various types of electrode material in *medical diathermy* and our choice has finally narrowed down to block tin or silver mesh. Water or saline-soaked materials we mention merely to condemn them as being useless as well as dangerous to both patient and physician. Soap lather or shaving-cream assure the best contact between electrode and skin surface. For *surgical diathermy* numerous types

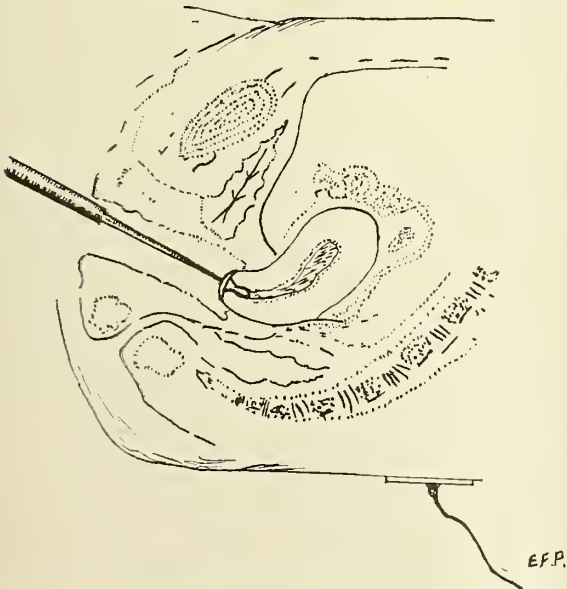


Fig. 1 Showing Peacock electrode in position for treating cervix

of electrodes have been used, from the sharp-pointed needle to the button electrode of three-eighths inch diameter. Larger electrodes than the last named are not advisable as the operator would experience much difficulty in judging the amount of tissue destruction. A new cervical electrode, presented by one of us (C. L. P.) at the last session of the Southern Medical Association, Section on Urology, has been found eminently satisfactory in the treatment of endocervicitis. (See Fig. 1.)

Too much stress cannot be placed upon the technique in the application of the diathermy electrodes, the amount of current to employ in the given case and the time to allow for such a treatment. Experience alone will bring success. We have not found that thermometers were of any real value in determining heat-production because the parts under treatment are, with few exceptions, inaccessible at point of maximum thermal production. We have been obtaining results at a much less degree of heat than is recommended in recent articles on the subject. It is not possible to construct a working chart as to the number of milliamperes necessary for any given special treatment, yet we never administer a treatment without, in some form, estimating the strength of current to be used. This can best be explained by stating that there are many different types of machines now in use, each with different makes of spark gaps and varying perceptibly in amount of voltage, amperage, etc. Then we must consider the difference in skin tolerance and resistance, areas and locations of application, the kind of electrode material used and the results desired. It is not within the scope of this paper to cover the minute details of technique of the various applications possible, but as an example we would relate that with our favorite machine, in giving a through and through treatment for relief of pain in the abdominal cavity, using electrodes of equal size, anterior-posterior, the point of tolerance by the average patient is between 25 and 50 milliamperes per square inch.

Among the conditions amenable to *medical diathermy* should be mentioned: pelvic and abdominal adhesions, nephralgia, chronic salpingitis, chronic cholecystitis, various forms of fibrosis, arthritis, sacroiliac arthralgia, loss of function of muscles due to disuse, certain types of dysmenorrhea, sprains and injuries with acute swelling, neuralgia, myalgia, epididymitis and prostatitis. Whereas time will not permit

our dwelling upon the various ailments in which we have been successful with *medical diathermy*, we cannot allow this opportunity to pass without again emphasizing the satisfactory results we have attained in epididymitis, arthritis, endocervicitis and dysmenorrhea.

The application of the electrodes for *medical diathermy*, while they might appear intricate at first glance, are simple enough if one will but conform to certain details. Poor technique, whereby the operator substitutes *stimulative* for *sedative* technique, would naturally do the patient more damage than good. Only a few days ago a case of epididymitis came under our observation which had been improperly treated with diathermy in which the condition had been made decidedly worse by the procedure. A second application of diathermy, properly given, resulted in prompt improvement. The pains of post-operative abdominal adhesions, one of the bugbears of the surgeon, are promptly ameliorated by the *sedative* technique of diathermy. How this is accomplished we illustrate in Fig. 2.

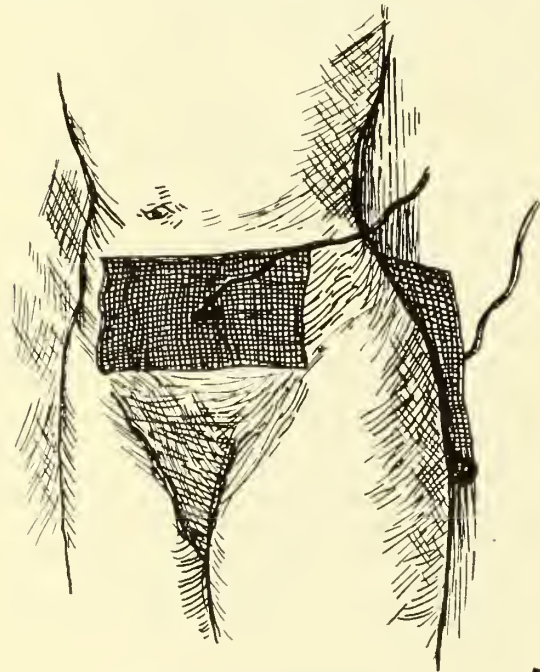


Fig. 2 Showing Mesh Electrodes in position for the treatment of post-operative abdominal adhesions

*Surgical diathermy* (electro-coagulation) should not be confused with *fulguration*, for in the former there is no sparking, therefore no carbonization of tissue, but a cooking process whereby the coagulation of tumor cells can be most effectively carried

out, the degree of destruction being governed by the size of the electrode, the amount of current used and the length of time of application. By this procedure the surgeon is enabled to perform minor and major surgery covering a wide range, being assured of a minimum amount of shock and hemorrhage, with the added advantage of a sterile wound which heals quickly and without scar. Among the conditions which are being successfully treated with *surgical diathermy* are: superficial warts, moles, and other skin tumors including epithelioma, caruncles of the female urethra, papilloma of urethra and bladder, chancroidal infections, ulcers, abscesses, para- and peri-urethral gland infections, endocervicitis, Bartholinitis, skenitis, etc.

TABULATION OF CASES TREATED WITH  
DIATHERMY

	Not		Total
	Improved	Improved	
BLADDER TUMORS			
(a) Benign .....	8	1	9
(b) Malignant .....	0	4	4
URETHRAL TUMORS:			
(a) Benign .....	17	0	17
(b) Malignant .....	1	1	2
CHANCROIDS .....	12	4	16
GRANULOMA .....	6	0	6
VENEREAL WARTS .....	7	0	7
PARA-URETHRITIS .....	5	0	5
ENDOCERVICITIS .....	10	1	11
EPIDIDYMITIS .....	50	2	52
EPIDIDYMO-ORCHITIS .....	2	0	2
ARTHRITIS .....	12	0	12
LUMBO-SACRAL ARTHRALGIA ...	4	2	6
PELVIC ADHESIONS .....	4	2	6
ABDOMINAL ADHESIONS .....	4	1	5
URETHRITIS .....	5	3	8
PROSTATITIS .....	4	4	8
NEPHRALGIA .....	2	1	3
VASITIS .....	6	0	6
TOTAL .....	159	26	185

FIG. 3.

Since making our preliminary report on the treatment of 73 cases by diathermy before the Section of Urology, of the American Medical Association, in June, 1924, at Chicago, we have been able to add 112 cases, bringing the total to 185. As will be seen by referring to the tabulation, Fig. 3, 159 or 85.9 per cent of cases were improved by diathermy, while 26 or 14 per cent were not improved. Many of the cases in the "improved" column actually represent cures, but as a definite end-result statistics are not available, due to the fact that many of our patients were from out-of-town and left before a final appraisal could be made, it is deemed best to err in favor of the patient rather than be inaccu-

rate. Eliminating the cases of advanced malignancy (all cancers treated were in the inoperable stage), our failure to achieve results can be ascribed to two factors: faulty technique in treatment or failure on the part of the patient to cooperate intelligently.

CONCLUSIONS

1. Medical diathermy, if evaluated as a pain-reliever alone, cannot be over-estimated as a link in our therapeutic chain. Its possibilities in the management of inflammation and fibrosis are not yet sufficiently appreciated by the profession.

2. Surgical diathermy offers to the general surgeon a valuable adjunct in the treatment of many surgical conditions refractive to the usual means of treatment heretofore employed.

DISCUSSION

Dr. W. A. Lurié: I would like to ask a question or two, perhaps to impress the points made. In their experience has there been any way to determine the amount of heat and length of time that will be required for perhaps a sedative treatment on the one hand, or for the production of an antiseptic effect on the other, or a destructive effect? Dr. Peacock states that we must be very careful about the destruction, that it penetrates deeply and sometimes we find the depth of penetration and destruction greater than anticipated. How does one guard against that?

In cases of neuritis, and other painful conditions which do not seem to respond very kindly to sedative diathermy (perhaps due to faulty technique) I have thought it necessary, in these instances, to begin with a low amperage and give the treatment over an extended time rather than to use a higher milliamperage and give a treatment of a comparatively shorter time. I would like to know what Dr. Walther would say relative to such a procedure?

From experience with diathermy for the relief of post-operative pain, I can heartily agree with the essayist in that there is nothing like a good, well timed, well given diathermy treatment to relieve all pain. Traumatic joints will get well decidedly quicker. The patient will be relieved of a longer convalescence by a properly timed, properly given and early enough given treatment of diathermy. The subject of physiotherapy, as Dr. Walther started, embraces many methods of treatment besides just diathermy. It includes all forms of electrotherapy and the energies derived from radiation, but as the paper did not go into these phases, they are not for discussion at this time.

I believe, with Dr. Walther, that physiotherapy, particularly diathermy (which is in its infancy), will be one of the potentialities of the future.

Dr. C. L. Peacock: We have here the mesh (illustrating) mentioned by Dr. Walther. It may be obtained in different sizes or by the yard from any electrical supply house. This is the material used for electrodes in the treatment of adhesions, epididymitis, arthritis, etc. These are some of the surgical electrodes (illustrating) different sizes, shapes and makes. Cervical electrode, but-

ton electrode, ball and needle electrode. The button is used for the destruction of cancer or large areas under the direction vision of the eye. The ball for the cavities and deeper seated lesions. The needles for warts, caruncles and similar conditions.

To anyone taking up diathermy there are a few points to be emphasized:

The first is a good machine; without this you cannot obtain results. Diathermy is really something different. One cannot push a button and then let the machine do the work. It is necessary to know how, why and when; study the case as well as the methods of application and then proceed with a perfect technic and the results will speak for themselves.

A knowledge of electricity is another and very important item. We do not expect everyone using diathermy to be an electrician or electrical engineer, but they should know something of the fundamentals of electricity.

Technic is the most important thing in diathermy. If this is not absolutely correct in every detail failure is the result, and especially does this apply to sedative type of medical diathermy. Through faulty technic you are apt to shock the patient, and in lieu of allaying pain, aggravate it.

An example of medical diathermy for the relief of pain is in lumbar region; place the smaller electrode over the site of pain and the larger on the abdomen (illustrating the methods of application to obtain the point of maximum heat by varying the size of the electrodes). Fig. 4.

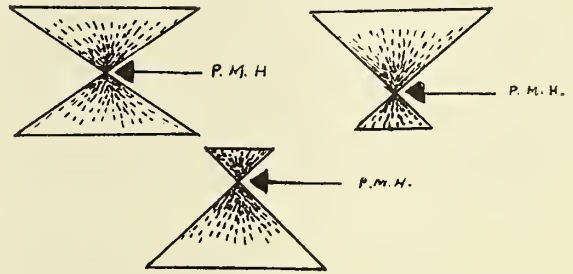


Fig. 4.

In surgical diathermy one must be very careful of the smaller or active electrode, as the destruction of tissue is much deeper than can be seen (illustrating).

Diathermy differs from fulguration in many ways. In the former the electrode is in contact with parts, no arc is formed, therefore no sparking with the formation of carbon. The heat is generated in the tissues and the amount of destruction will depend on the size of electrode, amount of current used and time of application. In fulguration there is sparking with the formation of carbon, which is a non-conductor of electricity, therefore placing between our electrodes a form of insulation which prevents the destruction of tissue except at point of contact (illustrating the depth of destruction in diathermy and fulguration). Fig. 5.

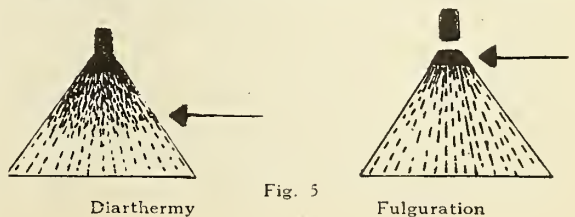


Fig. 5

Dr. H. W. E. Walther (Concluding): There are two types of doctors: the one an advocate of electrotherapeutic treatment; the other who says it is no good—he has tried it and found it wanting. I did not invest in diathermy apparatus until 1923 when demonstrations, to my satisfaction, were observed by me in the leading hospitals of Chicago. I have done a great deal of experimental work in diathermy. The attitude so far of the public towards this work has been warranted. Machines have been sold by manufacturers, and claims made that could not be substantiated. But that day has passed and there is not a man in this audience who can afford to remain apathetic to diathermy very much longer.

The work in diathermy is time-consuming and I wish here to express my thanks to Dr. Peacock for his untiring efforts in aiding me carry out this work on such a large scale. These treatments take thirty-five to forty minutes, and sometimes an hour. The busy surgeon cannot do it himself; the busy practitioner cannot do it himself. The practical way is to have a physiotherapy department connected with the hospital where the doctor does his work, to be supervised by someone competent to do this work, and see that it is done, efficiently. For unless it is done efficiently it is valueless.

Regarding machines: The portable machines will not do the work which larger machines will do. For surgery, the destroying of tumor tissue, etc., you have everything that is desired in the portable unit, but in orthopedic work, where you want intensive penetration, as in hip joints and lumbosacral articulations, it cannot be done with the smaller machine satisfactorily; you burn out your machine. You must have a large machine with sufficient power to do the work. A machine with a voltage of 3,000 cannot penetrate all parts of the body, but with 35,000 volts you can go through any portion of the body. The minimum voltage of a good diathermy machine should be 10,000 volts.

## THE MASTOID AS A PROBLEM OF THE GENERAL PRACTITIONER\*

EDWIN WHITTAKER, M. D.

BATON ROUGE, LA.

The chief problem of the general practitioner regarding mastoiditis is its prevention, and here the burden generally falls when upon the shoulders of the family physicians.

Pathologically, mastoiditis must always, or nearly always, follow an infection of the middle ear, but clinically, cases are met with where the middle ear disease is so trifling that the hearing is normal, and the drum membrane is of natural appearance, and yet there is present mastoiditis with abscess formation.

Frequently, we make a grave, yet pardonable, error in allowing a severe otitis media to develop by overlooking its begin-

ning on account of there being no complaint from the patient of pain in the ear; especially so in three diseases most conducive of otitis media,—pneumonia, influenza and scarlet fever,—the patient is very likely to be so obtunded mentally as to fail to feel pain in the ear during any stage of the process. The patient not complaining of pain during this state of mental lethargy may easily give us a sense of false security and throw us off our guard in regard to this very important condition. Even though this mental lethargy be lacking, there may easily be a middle ear involvement without pain, owing to a certain amount of drainage through the eustachian tube, this drainage relieving the pressure which is the cause of pain.

The problem of the mastoid falling upon the general practitioner is best solved by the early recognition and immediate treatment of an oncoming otitis media. First of all, do not be deceived by the patient's not complaining of pain in the ear. In any condition which may lead to middle ear infection, keep the ears under daily observation. In cases where the infection is severely virulent, such as influenza, pneumonia, scarlet fever, etc., the ears should be examined morning and evening.

At the first evidence of otitis media get busy. If the ear drum is merely pink or reddish, local treatment will often abort the forming abscess. In my private practice I have had excellent results with the following treatment, for which I am indebted to Dr. Joachim, of New Orleans:

Iodized Phenol Gtt. VIII.  
Glycerine Z, L11.

Five drops in ear three or four times daily. McKenzie recommends the installation of 12 per cent carbolic acid in glycerine. The patient should be lying on the sound side.

The drum should be inspected frequently, and if the symptoms remain unabated, and redness and swelling of the membrane show no sign of lessening, the membrane should be incised at once.

An excellent local anaesthetic for this procedure is a mixture of equal parts of crystals cocaine, menthol and phenol, which readily liquidifies.

A few drops instilled into the ear and left twenty minutes will render the incision practically painless.

After the incision the ear should be frequently irrigated with a strong boric acid solution. McKenzie recommends the occasional instillation of 12 per cent phenol in

\*Read before the Louisiana State Medical Society, Opelousas, La., April 21-24, 1924.



glycerine in order to prevent mixed infection, especially staphylococcal, which may lead to a chronic otorrhoea. During the stage of drainage the patient should lie on the affected side.

It is best not to use any oily preparations in the ear at this stage, as the oil not only has a tendency to block drainage, but mixed with the debris becomes rancid and merely adds to the irritation.

The factor most responsible for otitis media in children is the infected adenoid and tonsil. These, of course, should be removed at a suitable time.

Among intra-nasal conditions conducive of otitis media may be mentioned the deflected septum, sinusitis, and polypi, which conditions should be also corrected by the proper surgical procedures.

The practice of parents using old-time home remedies for acute earache in children cannot be too strongly condemned. Any case of earache should be seen by physician at the earliest possible moment.

There are many regrettable cases where, in spite of the promptness and skill of the physician in treating the acute ear, mastoiditis will supervene. During the early stage the application of leches to the mastoid tip, followed by the constant ice bag, will often result in rapid resolution of the process.

If after these measures have been resorted to there continue high temperature, pain, redness, oedema, and pitting upon pressure over the mastoid, the case should be at once referred to the otologist for surgical interference.

#### DISCUSSION

Dr. J. H. McCaa (Chamberlain): I was called to see a patient whose pulse was 100 and respiration 20 Temp. N. The child had given no history of pain before. About two months previous he had middle ear trouble with discharge from the ear. He went to bed rather early one night—he would not talk—and the parents were uneasy and sent for me. I examined him and went into the previous history and found that he had middle ear trouble. I examined his mouth and throat, palpitated right mastoid and found it bulging. Friction over the mastoid showed no evidence of pain. The child was taken to the hospital and the next morning operated, and the mastoid cells were found full of pus. The pus was finding its way almost into the lateral sinus, but the child had never had pain previous or suffered from same.

Dr. C. C. DeGravelles (Morgan City): I want to report a case that is distinctly interesting as showing the absolute absence of pain that we frequently have in this condition. About a year ago I was called to see a little girl five years old with a temperature of 104°. She had had a chill, two hours before I was called. I found nothing on which to make a diagnosis. I got a

specimen of blood which was negative for malaria. This temperature persisted for four days without any clinical signs. Then I happened to remember the teaching that whenever a child had fever that could not be accounted for, look at the ear. I looked at the ear and found the drum ready to rupture; it ruptured that night. But the temperature kept up. There was no evidence of mastoid, but fearing mastoid involvement I referred her to Doctor DuPuy. He found mastoid involvement and operated. The child made an uneventful recovery, but on the day she left the hospital she had another chill and the temperature went up to 104° and remained there for two or three days, when the same condition arose on the other side. Doctor DuPuy had to do a double mastoid.

This child had absolutely no pain at any time. Pain is not an element in these cases, but if you have high temperature that cannot be explained, look at the ear.

Dr. Edwin Whitaker (closing): I am glad to hear that some of the men have had an experience like mine. Some of the men in Baton Rouge said it was practically impossible to have an otitis media without pain.

I want to refer to a case of that kind that I saw in the Sydenham Hospital in Baltimore. A child six years old had been running a fever for two weeks. She was treated, but the fever remained. In giving the child a physical examination we found inflammation of both ears. There was bulging of the ear drums. A mastoid was done, but the child died. If we had examined the child twice a day probably there would have been no mastoid at all. I believe you will agree that about 90 per cent of mastoids could be treated if we got into the ears soon enough and were not deceived by the patient's failure to complain of pain.

One paragraph I omitted. In examining the ears if you find redness and inflammation of the drum, if there is a bulging of Shrapnel's membrane, it is best not to temporize—do a paracentesis at once.

In closing, I would like to say that the general practitioner should have a head mirror and an ear speculum the same as a tongue depressor or anything else, and make use of them. In case of infective fever, such as scarlet fever, measles, whooping cough, diphtheria, influenza, examination of the ears should be done as regularly as you examine the patient.

#### HEART DISEASE.\*

G. C. KILPATRICK, M. D.

MOBILE, ALA.

This is indeed "the age of heart defects" and the greatest demand upon the public health today is the problem of preventive medicine in reducing the incidence and death rate in epidemic and infectious diseases; not alone because they are per se of grave importance, but because in them lie the suffering and incapacity of heart disease as a complication or sequellae of as yet unmeasured magnitude. Prevention,

\*Read before the Medical Association of the State of Alabama. Montgomery, April 15, 1924.

therefore, of the incidence of cardiac involvement will be in direct proportion to the accuracy of our knowledge of such diseases gained, by scientific study and carefully tabulated observations and the successful elucidation of their pathogenesis to the public in general.

That hearts seldom fail because of inherent defect but as a result of preventable disease constitutes information not properly appreciated by the physician, and unknown to the public.

Consequently the necessity for a physical examination of such a large proportion of the young men of our country, has awakened the public mind to physical hazard of ill health and poor physical condition thus disclosed, and aroused a searching interest in the relation of industry to his productive proficiency and to health in general, and a demand that adequate guidance be forthcoming to reduce the economic burden thus imposed and limit the destruction of life seen to be in such full progress.

Four percent or more of the young men called in the draft were disqualified by the examining physicians of the local boards, and finally by the army surgeons at the various camps, for organic heart disease, resulting in a total rejection of 42 per thousand, or more than 200,000 young men among the five million recruits examined, of military age. Alarming as these figures are, they do not include an unknown but what must be unquestionably, a considerable number of men who had defective hearts, but who were accepted or passed unnoticed. On the other hand, in drawing a conclusion as to the incidence of heart disease in general, we must not lose sight of the fact that many men were rejected whose hearts were sound, and that these figures do not include the female sex. Further, that these figures refer only to a twelve-year period of life in the nation, and have nothing to do with the unnumbered cases resulting from degenerative changes and syphilis, seldom seen in youth, but of high mortality percentage after forty.

Mortality statistics from civil life, however, grow increasingly more reliable, presenting comparative figures which permit conclusions of great accuracy and furnish a basis for the assumption that approximately four million people are affected with organic heart disease, and that the number is fast increasing.

Fourteen per cent of total deaths in the registration area, which is about 60 per cent of the area of the United States, re-

sult from heart disease, and not less than 200,000 deaths from the same cause occur annually in the country as a whole, and this number is increased by not less than ten thousand each year, causing an appalling mortality of one death in slightly less than every five from all causes whatsoever in persons of forty years of age or older; and one death in about every eight of the total deaths from all causes at all ages.

These staggering figures reduced to more comprehensive terms, disclose the fact that every three minutes during the 24 hours, a death results from heart disease, and that the position cardiac morbidity occupies is that of the greatest single cause of death in the United States, exceeding in importance in a social and industrial sense tuberculosis, as a public health problem; not because the number of deaths from heart disease out-numbers the mortality figure of the "great white plague about two to one, but the natural immunity of the human family which is being gradually developed by the resistance of the human organism against the tubercle bacillus, aids materially in repelling its onslaught, and, indeed, foretells its disappearance as a disease in the ages to come, even as yellow fever disappeared from Africa in the ages of the past.

Against heart disease which then causes more deaths than tuberculosis and cancer combined, there is neither natural nor acquired immunity, and such damage as the heart may suffer as a complication or sequella of other and preventable disease, even when recovery seems to have taken place, must be taken in to grave consideration as a source of potential weakness in all succeeding illnesses.

As a major item then for public health consideration in the prevention and control of this premier affection among diseases of death, and heaviest of the economic burdens placed upon its victim by handicapping him industrially, and finally, by cutting his life in twain, no disease with which we must contend reaches its magnitude.

Essentially, it is a disease of childhood and youth, and the proposition may be stated that it is never primary, but results from some other disease, thus presenting ever widening boundaries for development, while at the same time, demanding greater breadth of knowledge for its curtailment—a hoped for consummation holding forth much promise if one takes into consideration the successful elimination of typhoid

fever as a public health problem, by vaccination.

In the prevention of heart disease, assessment of the value of the methods employed depends upon a thorough understanding of the process of the disease and its etiological development, briefly summed up in this instance, by the dictum that public education, hygiene, quarantine, convalescence and early diagnosis, methodically applied and co-operatively controlled, in all epidemic and infectious diseases, will reduce the incidence of heart disturbance to a minimum in children, slow its progress in the adult, and lengthen the life and increase the comfort of the cardiac cases of late middle age, for, despite the utter seriousness of heart disease and its renal-vascular complications, it has been truthfully said, "there are few chronic diseases so amenable to treatment and so compatible with long life and comfort if handled judiciously, as cardiac cases."

The variation, therefore, of causative factors which are directly responsible for the development of heart disease presents those infectious and contagious diseases which are in their own importance, public health problems demanding solution, with especial reference to the child and youth, among whom it thrives in particular.

Rheumatism is the classic example and leader of the group, followed closely by such diseases as scarlet fever, diphtheria, infected tonsils and teeth, and cryptic foci, all bearing the classification of childhood diseases, and subject to successful quarantine in the vast majority of cases, while per se, they present markedly limited tendency to spread among adults.

According to Cabot, hearts fail as a result of three main causes: Rheumatism, which he places at 40 per cent, while others name figures as high as 60 per cent; Hypertension, 40 per cent, and Syphilis, 12 per cent.

These last two may be summed up by the terms degeneration and syphilis, and are confined almost entirely to persons over forty years of age.

The following figures were obtained in the examination of a group of school children who were considered normal at the time: 58 per cent had had measles, 33 per cent whooping cough, 18 per cent an attack of tonsilitis; they had come through these infections without developing heart disease up to the time of examination, whereas, another group of school children, also of York City, showed definite cardiac dis-

turbance in the following ratio: 64 per cent had had tonsilitis; 45 per cent rheumatism, 35 per cent measles, 18 per cent pneumonia, 17 per cent diphtheria, 14 per cent chorea, 13 per cent whooping cough, 12 per cent scarlet fever.

The Department of Health reports of New York City covering about a quarter of a million examinations, show from 1.5 per cent to 2 per cent of school children have defects of the heart, while it has been estimated that perhaps 2 per cent of adults are in immediate need of medical attention for hearts that are beginning to give way.

The ratio of the incidence of heart disease to the above percentages is maintained with such constancy wherever careful examination of school children obtains, that no conclusion can be arrived at other than that quarantine against all forms of possible infection including mild colds and fevers, during the first decade of life removes grave danger from the child and, potentially, the adult.

This has been demonstrated by systematic examinations of school children from the sixth to the fourteenth year. In other words, tabulate the findings in the examination of a hundred children of seven years of age chosen at random and compare with the results of an examination of the same hundred children after they have reached the age of fourteen, and it will be seen that the number of cases of heart disease will have doubled.

The idea has long been more or less prevalent among parents and to some extent winked at by physicians, that so-called minor diseases such as whooping cough and measles (both showing very high mortality), chicken pox, and sometimes the more serious infections, may as well not be quarantined against since the child is bound to have them sooner or later anyway, and the earlier the better.

No hypothesis could be more seriously misleading than that, as I have attempted to show, for the older a person grows, the less likelihood of his developing such a disease, and the more improbable the damage to the heart.

To what extent a prolonged convalescence inhibits the development of circulatory debility the writer does not know; there can be no question but that a rapid return to everyday life either in young or old, following an acute infection, places a strain upon an injured heart which results often in permanent damage.

It is more and more appreciated that de-

generative changes in the adult whether due to senescence, chronic infection, occupation or other cause, can be delayed and in no inconsiderate number of instances, prevented by periodic examinations.

If this applies so forcibly in the case of the adult, how much more essential it is that the same applies in the rule of health of the child in whom heart disease is an incipient affection tending to progressive development when unrecognized.

When the symptoms of cardiac debility are sufficiently prominent to attract attention, it is definitely certain that damage to the heart of a permanent nature has resulted which might have been prevented had a regimen of systematic observation and examination been followed.

Treatment, therefore, of a heart that is beginning to break down should begin by the removal at once of whatever focal infection might be present, and the institution of a regimen suited to the proper growth and development of the patient if a child, while adults should be carefully trained in methods that upbuild torndown compensation, and guard, particularly, against its recurrence.

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## THE INTERRUPTION OF PREGNANCY BY CAESAREAN SECTION WITH STERILIZATION OF THE TUBES

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Considerable number of gynecologic operations are performed in those cases, in which the interruption of pregnancy with contemporary sterilization of the tubes is—according to the physical examinations—unconditionally indicated. Many of these cases are scarcely suitable for extensive surgical treatment on account of the patient's general condition. As is well known these patients are suffering from well advanced pulmonary tuberculosis, decompensated valvular diseases or chronic nephritis, cases, in which a pregnancy, labor or major surgical operations, connected with severe anatomic destructions, loss of blood and long bed rest, should not be risked. Experience shows that very often the simple evacuation of the uterine cavity aggravates the patient's general condition and chiefly the condition of tuberculosis. In all of these cases the most suitable treat-

ment is evidently the interruption of pregnancy with simultaneous sterilization of the tubes by means of the most careful and gentle method, sparing the patient the bi-temporary operation, which causes very often severe excitements.

The simple evacuation of the womb, which is often connected with unexpected degrees of hemorrhages and all manipulations, which include dilatation, rupture of the membranes, administration of drugs producing uterine contractions (oral or parenteral) cannot be considered as suitable methods, since they aggravate very often the general condition (tuberculosis) and on the other hand the proper aim—the sterilization of the patient—is not yet reached by means of all these methods. All other treatments, the vaginal hysterectomy with subsequent bilateral salpingectomy, the vaginal and abdominal panhysterectomy, the supravaginal amputation are operations of long duration and are connected with the danger of after-bleeding and infection. All these circumstances are able to aggravate the patient's general condition.

Walthard in 1912, and the following year Sellheim and Anderes, described the interruption of pregnancy with contemporary sterilization of the tubes in cases, in which the interruption of gestation and the exclusion of subsequent pregnancies are absolutely indicated. Recently Doerfler and Frey give statistical reports about the operative results.

The operation is substantially a classic caesarean section, which can be performed in any stage of the pregnancy and which is exercised in different manner by the various authors.

I performed this operation with several modifications in fourteen cases, as follows:

A median incision is made through the abdominal wall between the symphysis and umbilicus, measuring not more than four inches in length. The patient is raised in moderate Trendelenburg position, a self-retaining retractor is adjusted and the uterus is then everted. The intestines are well packed off with gauze pads. On the anterior wall of the everted uterine body a transverse incision is made through the perimetrium, measuring 2 inches and the perimetrium is then pushed downward (partly blunt and partly with the scissors). On this denuded portion of the uterine wall a short sagittal incision is made, which opens the uterine cavity. In most of the cases the uterine content can be easily removed blunt with the finger (rarely the

blunt curette is necessary). The cavity being completely evacuated, a whole ampule pituitary extract and an ampule of ergot should be injected into the myometrium, the result is an immediate contraction. The retrograd dilatation of the cervix I have never accomplished, and in spite of this I never observed retention of the lochia and its consequences. The closure of the uterine wound is made by a running catgut-suture deep in the myometrium, avoiding the mucous membrane. Next 5-6 interrupted catgut-sutures unite the entire myometrium and finally a laced silk suture closes the replaced peritoneal flap. During this whole act bleeding rarely occurs. After renewing the isolating gauze pads, the sterilization should be performed. This may be accomplished by simple resection, by the wedge-shaped excision of the interstitial part of the tubes or by salpingectomy. All these methods have the disadvantages to cause oozing from the hyperemic tissues and on the other hand the ligations of the small vessels prolong the operation, this latter being not indifferent to the patient. To avoid this disadvantage, I perform the sterilization as follows: after picking up the tube with a clamp, I squeeze a loop of the tube and in the so formed furrow a catgut ligature is made. The tip of this loop is then cauterized. The advantage of this method is, that the annexes are not rooted up (this is in cases of chronic and subacute inflammation very desirable) and the entire act may be accomplished in a few minutes. After the bilateral sterilization, the abdominal wound is closed in the usual manner.

Instead of the above described sterilization, the castration or the postoperative X-ray treatment may be also used, but experience shows that the endocrine disorders following castration are much more severe than the malaises, caused by menstrual bleeding.

I performed this operation in 8 cases of well advanced pulmonary tuberculosis, in 4 cases of mitral stenosis (decompensation) and in 2 cases of chronic nephritis. The patients were between the ages of 21-36 years. The pregnancies were 3-5-6 month old. Seven of the patients were multiparae and seven primiparae.

Concerning the anaesthetic, I never performed the operation under general anaesthesia, on account of the patient's general condition. In 6 cases I worked with infiltration of the abdominal wall (1 per cent novocain) and in 8 cases with lumbar an-

aesthesia (4 per cent stovain). In all cases I had absolute analgesia. In 2 cases the patients were nauseated and suffered from slight headaches after the lumbar anaesthesia, without further complications.

The described operative method has many advantages in well selected cases. It can be performed in 15-20 minutes, is not dangerous for the patient, the technic is simple, does not cause severe anatomic destructions, may be accomplished without general anaesthesia and enables the patient to get up very soon.

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### A PRELIMINARY NOTE ON THE TREATMENT OF AMEBIC DYSENTERY WITH STOVARSOL\*

by

F. M. JOHNS, M. D.

and

S. CHAILLE JAMISON, M. D.

NEW ORLEANS

Dr. E. Marchoux reported in the official French Bulletin of the Societ  Pathologie Exotique, (1) February 14, 1923, the eradication of *E. dysenteriae* cysts which had persisted in a patient following the clinical cure of his dysentery with emetine, by the use of Stovarsol (oxyaminophenylarsenic acid). Doses of 0.25 gm. were administered by mouth twice daily until 20 successive doses were given. Three cases of *E. coli* infection were similarly sterilized. Remarkable clinical results were also reported in chronic amebic dysentery, but these were followed by relapse in from ten days to three weeks.

This publication by Marchoux was soon followed by one by Nogue and Leger, (2) who reported three cases treated, one of whom relapsed nine days later and had to be treated with emetine.

Delanoe (3) reported the rapid clinical cure of two cases, one of which was of four years' duration. Subsequent observation was not reported.

At the Conference on Tropical Health problems held in Kingston, Jamaica, in July, 1924, Drs. Ch. Garin and P. R. Lepine (4) reported the use of Stovarsol followed by hypodermic administration of emetine

\*Read before Orleans Parish Medical Society January 26, 1925.

\*From the Department of Medicine, Tulane University School of Medicine.

or of acetylarsan, in a series of forty cases of amebiasis. No detailed studies of the effect of Stovarsol alone were given and the number of ultimate cures was not tabulated; neither was the length of time stated that patients had been observed.

Dr. Lepine kindly furnished one of us (Johns) enough Stovarsol (through the courtesy of the manufacturers, Poulenc Frères, Paris) to treat several cases of dysentery. A larger quantity of the drug has been furnished for experimental purposes by Messrs. Powers, Weightman and Rosengarten, of Philadelphia.

Up to the present time we have treated twenty-seven cases of amebic dysentery with Stovarsol. The results have been so remarkable that we feel justified in making this preliminary report. The cases have ranged in severity from chronic dysentery of long duration to active, severe, emaciated clinical cases. The duration of the disease has ranged from a few weeks to as long as 25 years. Diagnosis was confirmed in all cases by the presence of endamebae in the stools or in scrapings obtained through the proctoscope, and was always verified by the use of wet-fixed preparations stained by the iron-alum-hematoxylen method of staining the nuclear structure.

In all instances (except one patient that received a smaller amount) Stovarsol in 0.25 gram doses administered three times daily for one week caused complete subsidence of their symptoms, the improvement usually beginning about the third or fourth day of treatment.

The first case treated was found to have developed encysted endamebae on the fifteenth day following Stovarsol treatment, in spite of the hypodermic administration of emetine during the interval. The fourth case presented a clinical relapse on the sixteenth day, vegetative endamebae being found in the semi-liquid stool.

Three cases remained well and free from endamebae up to the present time upon the one course of treatment. Two of these received seven 1-2 grain doses of emetine, which was hardly sufficient to account for a cure by itself. These patients have been under observation for 99, 74 and 70 days, respectively.

The remaining cases have received a second course of stovarsol seven to ten days after the first and consisting of three 0.25 gm. tablets per day for seven days, or two tablets for twelve or fourteen days.

Up to the present time (Jan. 20, 1925) we have been able to follow with clinical,

proctoscopic and microscopic examination twenty cases for an average period of fifty-five days following completion of their treatment.

Sixteen cases have remained well and free from endamebae for the period of observation.

Four cases have relapsed; three of these clinically, and one developing cysts. The clinical relapses occurred within two weeks and were in patients having had dynestery for three to five years almost continuously. It must be noted, however, that the lesions as found by proctoscopic examination had subsided to a remarkable degree, a single rectal granulation the size of a silver dollar in one instance and pin point ulcerations in the other.

Many of the apparently cured patients have been proctoscoped, and stool examinations were repeatedly made, all with negative findings. It has been our experience that vegetative endamebae can be demonstrated in rectal lesions by proctoscopic examination or cysts can be found in formed stools within twelve to fifteen days following completion of a course of treatment of whatever kind in practically all cases that subsequently relapse. This experience leads to the hope that these cases treated with stovarsol and which are still free from symptoms or endamebae may be permanently cured of their infection.

Long standing cases with massive involvement of the bowel walls present the same difficulty of treatment that applies in other tissue invading parasitic diseases, the parasites being protected by impermeable walls of exudate and tissue proliferation. Indeed, it is evident that no known specific will cure in all instances. It is hoped that with the establishment of definite knowledge regarding the tolerance for this drug when given over longer periods of time than we have dared employ it, that the results will be even better than are here indicated.

Stovarsol (acetyloxyaminophenylarsenic acid, or "190") is an arsenical designed by Levaditi and Navarro to be administered through the digestive tract. It was synthesized by Fournier, Guenot and Schwartz (5) and has been the subject of considerable European investigation in the treatment of syphilis. It is apparently partly absorbed from the small intestine and then excreted through the large intestine. It is relatively non-toxic. The only untoward effect attributed to it that we have found was a dull headache in one instance, mild

rash in another, and probably a rash with slight temperature in a third case.

We have not attempted to determine the proper dosage of stovarsol, but the following observations may be mentioned:

One-quarter gram per day in one case failed to influence the symptoms to any great extent in seven days.

One-half gram per day has given favorable results in two sub-acute cases.

Three-quarters gram per day for seven-day periods has shown the most uniform results in the first course.

It will be necessary to follow these and other cases for a considerably longer period of time before we will know whether the apparent cures are complete or whether they are temporary. It is our intention to report more fully on these and other cases treated subsequently after a sufficient number have been under observation a sufficient length of time to determine the permanency of the results.

In the meantime, our experience so far indicates that we have in Stovarsol a supposedly harmless remedy for amebic dysentery that compares quite favorably with anything previously employed.

We desire to express our thanks to the following doctors for their assistance in referring cases and in the observation of this work: Drs. E. D. Martin, J. B. Elliott, H. E. Nelson, J. E. Landry, M. Bradburn, E. Bass, J. C. Cole, P. J. Kahle, J. Lescale, G. S. Bel, J. H. Smith, A. L. Levine, L. J. Stookey, A. M. Parson, and F. Loria.

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#### DISCUSSION

Dr. H. B. Gessner: Stovarsol is a subject in which I am keenly interested.

About two weeks ago Dr. Johns made a general laboratory survey for me in the course of which he examined a stool and found that I was the carrier of amoebae. Several years ago I had bowel trouble when I spent some time in Arizona. At this time Major Vedder examined a stool for me and said that I had amoebae. He showed them to me, large amoebae with a thick ectosarc travelling rapidly over the stage of the slide but without any blood corpuscles. I took emetin for several days, which was certainly not enjoyed—it is a painful experience.

Dr. Johns gave me twenty-one tablets, to be

taken three a day. I took them very regularly (but not exactly as he wanted me to), usually before eating; sometimes I forgot and took them after meals—at any rate, three a day for seven days. When the last one was taken I felt pretty bad and had a temperature of 100° F. Instead of attending the society meeting of that night I decided to stay home. Next day, temperature 102° with a slight rash. I did something that doctors will do—I went to the bath room and, notwithstanding the rash, took a hot bath. The next day (Wednesday) I had two very red eyes and was literally covered with a rash simulating measles. Dr. Cassegrain thought it was measles. My eyes troubled me to such an extent that I had Dr. Bahn examine them. He thought it was "measle eyes" and prescribed bathing them with hot boric acid solution, and applying ammoniated-Mercury ointment to the lids. I did it once, but had no discharge to wash away, so stopped the treatment. My eyes were very uncomfortable. Tuesday temperature 102°; Wednesday 101°; Thursday a little over 100°; Friday 99.6°; Saturday went out for an automobile ride; Sunday and Monday stayed at home; Tuesday went back to work.

I do not think that I had measles, having had neither conjunctival nor nasal nor bronchial catarrh, but I did think it was measles until I had seen Dr. A. Nelken at Touro. He had had patients to whom he gave salvarsan with resulting arsenic rash, like measles. When a small boy ten years of age I had measles. Last year I had several cases of measles among railroad employees; recently I have not been in contact with anyone who has had nasal, conjunctival or bronchial catarrh or a measles eruption. At the time I was exposed to the contagion I did not have measles—this year I was not exposed, but I did have what looked like it. It is reasonable to suppose that I had an arsenic eruption from stovarsol.

Dr. Johns has made another examination and this time no amoebae were found.

Dr. Randolph Lyons: I have had no experience with stovarsol, excepting two cases consisting of one week's preliminary treatment, for which Dr. Johns gave me some of this drug. I hope that Dr. Johns and Dr. Jamison have found some remedy that will take the place of the old treatment of dysentery. I can remember some years back when we started using ipecac pills, and later emetin was discovered which I think I was the first to use in this country. I was having it made and using it before the reports came out. The dosage was one-third grain, once a day, and they claimed that two grains affected a cure!!! It was being used for hemorrhage, bronchitis, etc., and was curing everything.

Like every new drug we are likely to overdo it. Now, stovarsol has cured malaria and a great many other things. We have to get down to facts and take things seriously, but not be over-enthusiastic. We know that emetin alone rarely cures amebic dysentery. The old treatment is an extremely difficult one and in some cases impractical. In some cases it is impossible to give ipecac. One elderly patient to whom I had given ten grains of emetic still had amebas in his stool, so I was delighted to have the opportunity of trying the new drug. Although he still has marked ulceration of the rectum, I have not been able to find any vegetative ameba in the stools.

The second case was a lady who said that she could not swallow large ipecac pills: I did not want to give her the emetin alone, so used the stovarsol. Her dysentery is very much better, but she still has some looseness of the bowels and

symptoms which look as though they might be due to arsenic. On the fifth day she developed severe neuritic pains of the lower limbs, associated with palpitation and weakness and urticaria. She had been going around with her dysentery before we started this treatment but being almost at the end of her treatment, I persisted in giving her the tablets. She still feels pretty weak, but her bowels are improved. The first case, (the old man), developed intercostal neuralgia—during the last few days he has shown some improvement.

I am under the impression that stovarsol is responsible for the neuritis and neuralgia in these cases, nothing very serious, not more so than the reaction which might follow the administration of ipecac and emetin. Emetin has to be used very carefully also.

If stovarsol fulfills its promise as a cure it is one of the greatest recent offerings to medicine and the doctors who have started its use are certainly to be congratulated. But, let us use a little bit of caution first, until we get more data on it.

Dr. A. L. Levin: I have been very much interested in the use of stovarsol in cases of amebiasis ever since Dr. Johns spoke to me about this drug. It is particularly interesting to me because of the simplicity of the treatment. The treatment of amebiasis by the method we have been employing, I believe, is the most unpleasant in the entire field of medicine; at times it is intolerable to the patient, the difficulty the druggist experiences in having the proper coating of salol on the ipecac pill, and other unpleasant features. If we can find some drug which will destroy the amoeba, is simple to administer, easy for the patient to take and without discomfort, unquestionably it will be quite a step forward in the treatment of amebiasis.

I have tried stovarsol on fourteen cases of amebiasis so far. In the first three cases there was a recurrence after administering eighteen tablets of stovarsol as advised, one three times a day.

In ward 18 of Charity Hospital I had a case which had been treated a year previous. He had taken in the neighborhood of four hundred ipecac pills and received twenty-two injections of emetin. One year later he developed the same symptoms of dysentery. Without putting him to bed or changing his diet or resorting to bowel irrigation I started on stovarsol. After he had taken four tablets all the dysenteric symptoms disappeared; stools became firm and normal in consistency. Two weeks later, after the stovarsol had been discontinued he developed a loose stool, and on examination I found the amoeba histolytica. I gave him a second course of two tablets per day and six injections of emetin. It has been a month since this course was finished. He is perfectly well and proctoscopically the ulcerated mucous membrane has cleared up entirely.

Another case who took the first treatment consisting of eighteen tablets with marked improvement, returned ten days later complaining of recurrence of dysentery. Examination of the stool revealed the vegetative Amoeba. I proceeded as in the first case with another course of Stovarsol plus Emetin; the results so far have been satisfactory, hence I have combined Emetin with Stovarsol in all other cases.

How long it is necessary to use Stovarsol to obtain a complete cure, we do not know. It took us years of experimentation to definitely decide that it requires one hundred Ipecac pills. In time we shall probably know how many Stovarsol tab-

lets are required for a complete cure. However, we must bear in mind that Stovarsol is an arsenical preparation containing 27 per cent Arsenic, and I have seen several cases with symptoms of arsenical poisoning. We must bear this in mind.

So far, my impression is that Stovarsol is one of the most favorable drugs we have today in combatting the symptoms of dysentery. As to procuring a definite and permanent eradication of amoeba, time will tell.

I have tried Stovarsol also in cases of other intestinal parasites such as Strongyloides, hookworm and flagellates. My impressions are as follows:

Two cases of Strongyloides have not been satisfactory. I have not found as yet a drug which will kill Strongyloides. I have tried everything that has been suggested.

In two cases of Strongyloides where I advised appendectomy we found strongyloides in the lumen of the appendix. It is possible as I have stated formerly, that when the lumen of the appendix becomes infested with parasites no drug will reach that part of the intestinal tract, and the only way to get rid of them is to remove the appendix.

In cases of Flagellates, I believe we have in stovarsol an excellent drug. The flagellates disappear very quickly.

In two cases of hookworm, Stovarsol absolutely failed to destroy the parasites.

Prof. F. Valenti reports two cases of malaria treated with Stovarsol with excellent results. One was Tertian and the other Quartan with enlargement of the spleen. The Quartan type was of one year's standing and had resisted the treatment of Quinine, but yielded to Stovarsol. The enlargement of the spleen disappeared very promptly.

Dr. Leon Bernard reported before the Academy of Medicine of Paris two cases of Enteritis with protozoa cured by the administration of Stovarsol. One was a case of Lamblia and the other was a case of dysentery caused by balantidium coli of 17 years' duration. Both cases were cured completely.

In my opinion, it is absolutely worth while to continue our experimentation with the use of Stovarsol in intestinal parasites.

Dr. C. C. Bass: Should Stovarsol prove as beneficial and effective in amebiasis as Dr. Johns and his co-workers have found it so far, it will certainly be a great advancement over other remedies. Even though it should not be more effective in the treatment of amebiasis, it is still an important discovery, since the simple administration of a simple drug by mouth is far preferable to the quite tedious and much more difficult treatment by hypodermics, ipecac pills and irrigation, etc.

I have watched some of these cases treated by Dr. Johns and I have been very much impressed with the fact that they are getting better results than I have personally ever seen gotten with emetine. If such results are obtained now in this early stage when so little is known about the drug and it is perhaps not being used in the best way, it is reasonable to expect better results later. Unquestionably, in stovarsol we have another very effective (if not the most effective) remedy for amebiasis. It is one which we hope will prove to be a specific cure for the disease.

Dr. F. M. Johns (closing): I do not think there is very much to say in conclusion. The fact re-



mains that sixteen cases in which stovarsol was given have remained well for a considerable time. A longer time must elapse before we can positively claim them cured; nevertheless, by proctoscopic inspection, and with examination of the stool, I believe we can tell whether the patient is going to relapse or not within three or four weeks.

Now, when it comes down to the cure of long-standing cases of amebiasis, it will probably take a very long time to saturate the patient with any specific and effect a complete cure. Anyone who has ever seen at autopsy the thickened walls, sinuses and lymph channels actually occluded with clumps of amebae will readily agree with me in this. On the other hand, the results obtained in some of these cases have been far in excess of theoretical considerations.

It appears to me now as if stovarsol is certainly a specific amebicidal agent, but that we need to know much more of its pharmacology in order to use it to the best advantage.

### HUMAN MYIASIS DUE TO OX BOT FLY LARVAE (HYPODERMA LINEATA)\*

J. A. LANFORD, M. D.

And

C. M. WARNER, M. D.

NEW ORLEANS.

Infection of human beings by the larvae of the Ox Bot fly, while rather rare is not so common but that another case would be interesting to add to the records.

As this condition occurs among humans, it is included in the broad classification made by Hope of Myiasis, which term covers the invasion of the human system by all types of fly larvae. However, Joseph has divided human invasion by fly larvae into myiasis interna or intestinalis, and myiasis externa or dermatosis and it is in this latter group into which Ox Bot fly larvae invasion falls.

The case was seen by one of us (Dr. Warner) in the wards of the South Mississippi Charity Hospital and is as follows:

"A white male child of 22 months was admitted into the hospital on October 21, 1923, suffering with an enlargement of the right testicle and the following additional information:

Four months previously, the mother noticed that the right testicle was slightly larger than the left. The discovery was made while bathing him and not because of any complaint on the part of the child, as the part at that time was not tender and there was no evidence of discomfort.

The condition remained unchanged until about one week before being brought to the hospital when the mother noticed that the

testicle was rapidly growing larger, it being tender to the touch and the child being disinclined to play; and on reclining kept his legs well apart.

On account of the acute inflammatory reaction, it was deemed advisable to undertake surgical procedure, and under general anaesthesia incision was made. In the tunica vaginalis, 3 fly larvae were found together with an acute inflammatory exudate. Following the surgical operation the patient recovered and, up to the present writing, has given no further history of a recurrence.

The larvae were submitted to Maj. James F. Coupal, Curator of the Army Medical Museum at Washington, who transmitted the following statement from Mr. C. T. Green of the Department of Entomology, Washington, D. C.—"Hypoderma, species? second stage larva, too young to identify species. Belongs to the Bot fly which sometimes attacks man, making large carbuncles." The mature larva is one and one-half inches long, or more and at least one-half-inch in thickness, covered with chaetae or spines, so that each segment is outlined by them.

In looking up the literature on this subject, there is recorded a number of invasions of this type of larva reported in this country and abroad, all of which have a similarity in their clinical course. To better understand the invasion, it is necessary to consider the life history of the Ox Bot fly, therefore, we quote rather freely from a bulletin issued by the division of Entomology.

The Ox Bot fly is quite common throughout the entire United States there being two varieties, one the *Hypoderma Bovis* which is common in northern and western United States; and the *Hypoderma Lineata* which occurs more frequently in the Southern and Western sections. This latter fly is commonly spoken of as the Heel Fly because of its peculiar desire to lay its eggs on the hair around the hocks of the animal and on its flanks. This fly does not sting or bite the animal, yet cattle are particularly afraid of them by instinct and in an effort to escape them, will stand in shallow water during the middle of the day. The eggs are attached to the hair in rows of 5 to 10, which no doubt you have seen as little yellow structures on the hairs of cattle and while they may be present anywhere on the body, the usual location is on the flanks and on the hair around the heels.

When the cattle lick themselves, the young larvae are taken into the mouth, as,

\*Read before the Louisiana State Medical Society. Opelousas, April 21-24, 1924.

under pressure and moisture, the egg readily splits at its anterior end and releases the young larva, which is already well developed when the egg is laid. Doubtless quite frequently the eggs with the contained larvae are taken with the hair in this licking, but in either event the larva in leaving the egg is armed with many minute spines, which permit it to adhere to and to penetrate the walls of the esophagus. Here it soon molts and takes on the second or smooth stage, which for eight or nine months wanders slowly in the tissues of its host. The slow movement and the little nourishment taken reduce the inflammation and irritation to a minimum; in fact, the most remarkable thing in the life-history of this larva is the long period of latency and the slight development that takes place during the summer and autumn months. During the late winter the larva reaches a point beneath the skin in the region of the back and penetrates the skin, anal end first as Dr. Curtice believes, and as seems most probable. Here it molts a second time and reassumes its spinous character, producing more or less inflammation and developing rapidly with its enlarged spiracles fitted for more perfect breathing. The third molt soon follows, and we get the more strongly spined grub, with its still larger spiracles, which lives in the swellings or sacs so well known to stockmen. It finally works its way out, drops to the ground, which it enters, and where it contracts, hardens and darkens in color. In a few weeks afterward the perfect fly issues." Infection of cattle by this larva is known as Warbles.

It is during the second stage of this development that the larva shows ability to change its position and to wander throughout the tissues of the body, during which time it may puncture any of the organs and tissues of the host. While we are most interested in the distribution and invasion of this organism in the human being, we should not lose sight of the vast economic damage to the cattle industry which it produces, particularly in the damage of the hide which it punctures and through which it escapes into the soil.

During its wanderings the larva may invade many important organs, such as the case we are reporting. Other writers have described their entrance into the anterior chamber of the eye with the destruction of that organ and they have been found in the spinal canal, having made their entrance through the intervertebral spaces. It is their desire to get to the skin and there-

fore, most of the recorded cases have their localization under the skin with the formation of a carbuncle like structure, through which the larva finally escapes.

As an illustration of their ability to wander, we will cite a case in which a small boy felt under the skin below the knee, a tender spot which in 24 hours had changed its position to one above the knee; it continued to move, transversing the thigh, over the abdomen, the side of the neck to the top of the head, back down behind the ear and was finally removed under the chin. There are many instances in which they have first appeared in an extremity and before migrating very far, have been removed by excision.

Our case is of most interest because of the fact that it had invaded the tunica vaginalis, that three of these larvae were together and that so far there has been no other larva found in the patient. It is our belief that the child became infected by drinking milk into which hair holding these larvae fell. The larva became free in the esophagus or alimentary tract and began their migration into the tissues.

This infection must be differentiated from larva migrans which is an extremely minute organism and never forms a large tumor like mass (carbuncle). It also must be distinguished from *dermatobia* which is always stationary and gives a history of a sting by a fly.

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#### DISCUSSION

Dr. Elizabeth Bass (New Orleans): This paper has certainly brought up a very important subject, although it is one we think very little about in connection with human infection. Looking up the literature I was very much interested to read an article by Surcouf, a man who has studied this infection especially, and he says that his belief is, after studying many cases, that infection is probably by way of the mosquito—that the fly deposits eggs in a glue or cement-like substance on the leaves of certain plants. A particular type of mosquito seek this material and being vicious biters carry the infection to man. He says, also, that on further observation he believes that instead of the eggs being deposited on the leaves of plants the mosquito in some way attacks the mother fly and deposits her eggs on it. This is borne out by the fact that these eggs apparently become attached only to this particular mosquito and are attached in a constant manner with the hatching end outward.

I am reminded of a case I had a couple of years ago in which the doctor sent a number of fly larvae for identification. He stated that two children in the same family were taken suddenly ill with severe cramps, nausea, vomiting and high fever, one of the children having convulsions and both passed larvae. Some months before the physician had seen the same children suffering in a similar way which he diagnosed and treated as ptomaine poisoning. The mother stated that the children passed "maggots" at this time. In the second attack she noticed the same kind of "worms" as she termed the larvae. The doctor was able to collect specimens under suitable conditions to exclude any outside infection. The infection in this instance was in all probability through contaminated food.

Many of us have no doubt seen the burrowing type of infection due to the screw-worm or blue-bottle fly larvae. This mucid fly deposits from 200 to 300 eggs in wounds and orifices having offensive discharges, as nose, ears, etc. Most of the men are also familiar with the type of infection that causes "wolves" in calves and other lower animals.

I would like to ask the essayist what would be the explanation of three larvae passing through the entire area of the body and all becoming located in the same region? Is it not possible that the parts were slightly inflamed and a local infection occurred instead of being carried in the milk to the tissues?

Dr. J. A. Lanford (closing): Doctor Bass has indicated quite well the extent to which larval infection of all varieties may be found in human beings. The object of my paper was largely to bring that fact to the profession, particularly as so many of them see this type of infection and are puzzled for a time as to the real facts.

It is interesting to consider the life history of the various insects about us and particularly important to know the different methods they have of attacking animals and human beings in fulfilling their life cycle. Some of the insects lay their eggs in material taken in with the food or drink, a common example of these is the horse bot fly (*Gastrophilus equi*), a stage in the development of this insect taking place within the stomach of the horse. The ox-bot fly, however, so deposits its eggs that they gain access to the alimentary tract of the animal, usually cattle, but the stage of their life cycle in the body of the animal is spent in migrating from the esophagus to a position within the skin of the back of the animal.

However, there is a type of fly larval infection (*Dermatobia hominis*) that we see in tropical and semi-tropical climates in which the larvae gains access into the animal through the bite of an insect. This larva lives at the site of its original focus, therefore, is not migratory, and its growth and development takes place in the structures of the skin and subcutaneous tissues, forming a large carbuncle like mass having a small opening in the center for breathing purposes.

However, I am unable to explain why we should find three larvae of the hypoderma lineata in the same location in this patient and none in other parts of the body. Yet, despite this unusual feature, there seems to be no doubt of the fact that the larvae are properly identified and must have gained entrance into the system of the patient through the food or drink, possibly the milk that was fed the baby.

## DIAGNOSIS AND SURGICAL TREATMENT OF CONGENITAL HYPERTROPHIC PYLORIC STENOSIS WITH REPORT OF CASES\*

THOS. B. SELLERS, M. D.

NEW ORLEANS.

George Armstrong of London described a case of hypertrophic pyloric stenosis as early as 1777. This shows that it is not a new disease.

My reasons for presenting this paper are (1) to call attention to the fact that possibly some cases of hypertrophic pyloric stenosis are either not recognized or recognized too late to give the benefit of surgery or medical treatment, and (2) to report two cases especially emphasizing treatment and points of surgical technique.

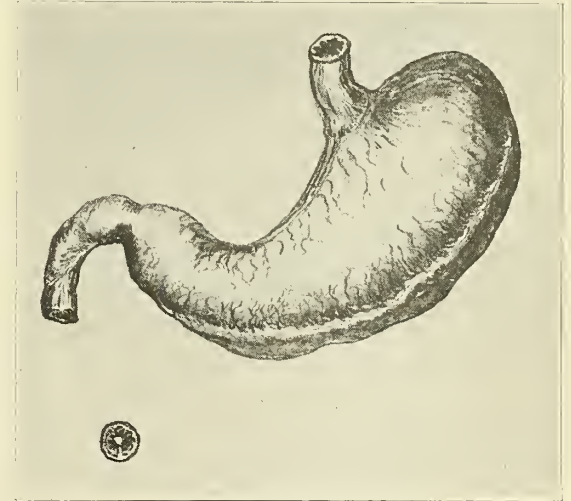


Fig. 1; Normal pylorus

were not operated on I judge that the physical condition was such, when they were admitted to the hospital, that the pediatri-

To substantiate my first point: The records at Charity Hospital, New Orleans, show six cases of pyloric stenosis handled. Five were not operated on, all of which died, one was operated on and was cured. From the history of the five cases which the physician thought they would not stand operative interference. These six cases were recorded during the past twelve years in the Charity Hospital.

The Touro Infirmary records show five cases including the two I am reporting. Four of these were operated on and cured,

\*Read before the Louisiana State Medical Society. Opelousas, April 21-24, 1924.

the other one was not operated on and died. These five cases were recorded during the past six years in Touro Infirmary.

Compare these figures with the record of Dr. Downes, who operated on 175 cases in 1920 and with that of Dr. Deaver, who operated on fifty-eight cases in the same



Fig. 2 Shows thickening of pylorus in hypertrophic pyloric stenosis

year; also the record of Dr. Rosenhaupt who reports one case of pyloric stenosis in every fifty babies, or 2 per cent, and that of Dr. Hertz who reports 2.7 per cent.

Congenital pyloric stenosis, or as sometimes called, expulsive vomiting, is a disease entity which is capable of causing loss of infant life if not recognized early. It has an almost pathognomonic sign and symptom complex, viz.

(1) A sudden, apparently causeless projectile vomiting starts about the third week of life, usually in breast fed children.

(2) There is a rapid loss of weight, mucous membrane and skin are dry, fontanels are often sunken in.

(3) The stomach can be readily outlined by a series of peristaltic waves which start at the left costal arch and pass diagonally to the right mammary line, apparently bombarding the pylorus; this is especially marked just after the ingestion of food.

(4) Often a tumor mass can be felt in the region of the pylorus.

(5) Constipation is usually marked; the constipation is not of a character to be confused with intestinal obstruction.

(6) Variot states that radiographic examination is the best single evidence of pyloric stenosis, but where the x-ray is not accessible there is no reason for a diagnosis not being made, as the clinical picture is unique and a diagnosis can readily be made

solely from observation in the majority of cases.

Pylorospasm and hypertonicity of infants are two conditions that might be confounded with pyloric stenosis. However, both of these can be relieved by the administration of comparatively large doses of atropin.

There is a difference of opinion as to when a case of hypertrophic pyloric stenosis becomes surgical. The statistics given above from Charity Hospital and Touro Infirmary records convince one that all border line cases should be handled surgically. Downs and others report that the mortality of cases handled medically is 10 to 50 per cent and of those handled surgically, in selected cases, 2 per cent. J. W. Emmett says that when a baby loses 20 per cent of its body weight, surgical treatment should be sought.

The cases that I am reporting were diagnosed and treated medically by Dr. W. W. Butterworth.

Case 1: Martha H., white, 9 weeks; full term normal delivery, first child, breast fed. Weight at birth, 9 lbs. Started vomiting at beginning of second week but regurgitated only a small portion of meal. This gradually grew worse; by the fourth week the vomiting was pronounced and projectile in character, in spite of diet and medical treatment. Various foods mixed with lime water were tried, also thick gruel as recommended by Sauer. Tincture of bella donna, sodium bromid, sodium citrate, codein sulphate and asafoetida all tried at different times. Gastric lavage with water, temperature 110 F., three times in 24 hours, gave most promising results at first. Bowels moved only with the assistance of enemas or purgatives. Patient lost weight rapidly.

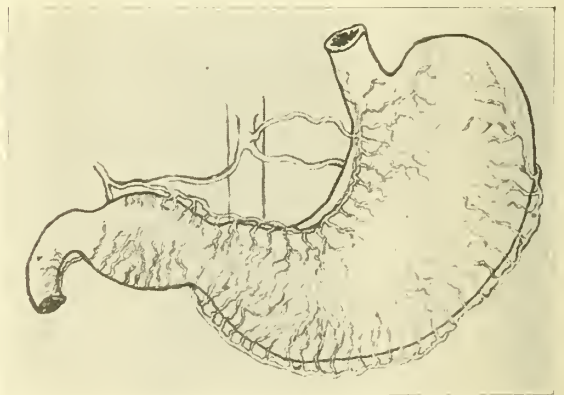


Fig. 3: Bloodless area where incision should be made

Was admitted to Touro Infirmary Jan. 8, 1923. Poorly developed, poorly nourished, weight 5 lbs. 9 oz. Skin, mucous membrane dry, fontanel sunken in, reflexes normal, temperature 99.3-5. Abdomen soft; small movable tumor mass palpable in upper right quadrant. Peristaltic wave very pronounced, running from the left costal arch diagonally to right mid mammary line. Extremities negative.

**Preparation for Operation:** Patient was nourished at regular intervals until 4 a.m. with the idea of getting in all liquids possible. 150 cc. saline solution was given by hypodermoclysis at 6 a.m. Stomach washed out thoroughly with warm saline solution just before operation. Extremities were well wrapped, and she was sent to operating room in warm blanket and placed on electric pad. Light ether anesthetic was given, 1-4 per cent novocaine was injected along line of incision. Of course the field of operation was prepared in the usual way.

**Operative Procedure:** A high right rectus about 1 1-2 inches long was made. The pylorus was delivered and the intestines were screened off with small gauze packs. A typical Rammstedt operation was performed as follows: A longitudinal incision was made through the bloodless area, beginning at the duodenal end and extending well up to the stomach, cutting only through the serosa, completing the incision to the mucosa with the handle of the knife, releasing all fibers so that the mucosa pouted into the gap. All bleeding points were ligated. The abdomen was closed, using three through and through silk worm retention sutures. No. 2 chromic catgut was used for peritoneum and fascia and plain catgut for the skin.

**Post-Operative Treatment:** The child was returned to a warm room awake and in good condition. Proctoclysis of 2 1-2 per cent sodium bicarbonate and glucose, also 100 c.c. of saline by hypodermoclysis were given very slowly. The temperature of each was 110 F. Morphine and sodium bromide were ordered for restlessness. Warm water and Hart's Elixir and a weak condensed milk formula were given with medicine dropper about two hours after the operation.

day the wound was dressed. There was no infection and apparently the wound had healed by first intention. I left orders that she could be moved to her home. The silk-worm sutures were not removed. Just before leaving the hospital the resident surgeon called me on account of slight oozing from the wound. He changed the dressing and phoned that the oozing was insignificant. An hour later the nurse at the home phoned me that



Fig. 5: Leon two days before operation



Fig. 4: Use of the handle of knife after incising the serosa

the dressing was again stained with blood. When I removed the dressing I found a knuckle of the bowel bulging through the wound between the silk-worm sutures. The patient was sent back to the hospital. General anesthetic was given, field of operation prepared in the usual way. On inspection of the wound I found that the catgut had been absorbed. The three silk-worm sutures were removed and the wound was then closed with through and through silk-worm very close together. No. 2 chromic catgut was used for the peritoneum and fascia, and silk for the skin. The following day the temperature ran up to 103 3-5, but her condition was good. Temperature rapidly returned to normal and she was discharged from the hospital again, permanently cured.

Case 2.—Leon H., white, seven weeks; full term normal delivery, fourth child, never breast fed. Weight at birth, 12 lbs. Started vomiting at end of first week. Was sent to Dr. W. W. Butterworth the fourth week and the vomiting and loss of weight persisted regardless of medical treatment and diet, as described in Martha H.'s case. Bowels were regular. Admitted to Touro June 28, 1923, for operation. Weight 7 lbs. 4 oz. Tall, well developed but poorly nourished. Skin and mucuous membrane dry, fontanel very much depressed, heart and lungs negative. Abdomen soft and symmetrical. Small tumor mass palpable in upper right quadrant of abdomen. Extremities negative, reflexes normal, genitals normal except

This was kept up during the day, and in the evening we started giving 50 per cent mother's milk. The strength of the mother's milk was increased until the end of the second day, then whole milk was given. The temperature ran to 103 the first post-operative day, 102 the second, 101 the third and 99 the fourth. After this the temperature was normal. Patient did not vomit after the second day. On the sixth post-operative

adherent prepuce. Peristaltic wave very pronounced after ingestion of food.

Pre-operative treatment and operative procedure practically same as in case of Martha H., except in closure of abdomen. In this case, I used through and through silk-worm sutures much closer together. Recovery uneventful. Did not vomit after operation. Discharged from hospital on July 6, 1923, cured.

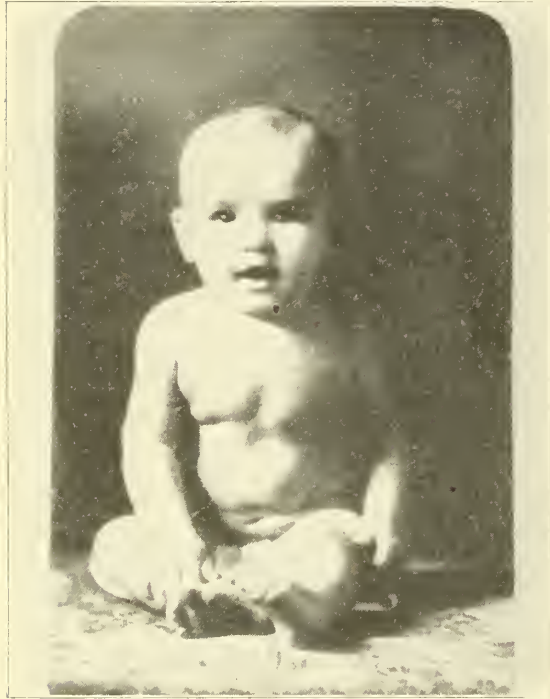


Fig. 6: Leon six months after operation

It is interesting, also unusual, to note that this patient was not breast fed and that his bowels moved regularly without a purgative.

In performing this operation of hypertrophic pyloric stenosis, it is important that it be done quickly and that all bleeding should be checked, as these infants cannot stand loss of blood. Also, too much stress cannot be laid on having an expert anesthetist, to give a light ether anesthetic.

I wish to thank Mr. W. T. Sheeley for the drawings used for the lantern slides, and Mr. J. O. Lisenby for looking up the hospital records.

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## DISCUSSION

Dr. Daniel N. Silverman (New Orleans): We cannot separate this condition that we see in infancy from some analogous conditions that we see in adults. I had occasion to see and to attempt treatment of one of these cases mentioned by Dr. Sellers, in consultation with Dr. Charles Bloom. This child had lost considerable weight, and on X-Ray examination we found that the stomach did not empty immediately, but within one hour two-thirds of the stomach was completely emptied. We attempted treatment of this case, Dr. Bloom thinking it was not a good surgical risk at the time, by the use of the duodenal tube. We were able, after 48 hours, to pass the duodenal tube into the second portion of the duodenum and feed the child in this manner over a period of three weeks. But, in spite of the fact that no food was allowed to remain in the stomach, there was spasm of the pylorus, and continuous regurgitation and vomiting of mucus.

We do not have a clinical entity of pyloric stenosis but we have an associated intestinal disturbance with the stomach condition, because all the organs of the gastrointestinal tract are more or less dependent upon each other. This child was not relieved until we resorted to surgery.

Dr. Thos. B. Sellers (closing): There are two other points I would like to emphasize: Dr. McGuire, of Richmond, Virginia, says: since the profession's attention has been called to pyloric stenosis, the number of operative cases has steadily increased in that vicinity. He believes many cases are not recognized. Often border-line cases that are treated medically do not develop physically—therefore—are susceptible to disease.

I want to thank Drs. Parham and DeBuys for their assistance in handling these cases.

## GLUCOSE AND INSULIN IN THE TREATMENT OF SHOCK

WALTER EDMOND LEVY, M. D.

and

HENRY MACHECA, M. D.

NEW ORLEANS

Mrs. G. F. B., age 26. Family history and past history irrelevant. One child 2 years ago. Labor and puerperium normal.

P. I. Patient gives a rather indefinite account of a midwife procedure, occurring about one month ago. She had missed two periods up to the time she went to the midwife. According to her husband, she began losing freely about four days ago (Feb. 14), passing, as he says, about 30 clots a day.

P. E. The patient is a well developed, but undernourished female. She is semi-conscious and

very anemic-looking. Her skin is cold, and beads of perspiration stand out over her entire body. Her teeth are clenched, and her face has an anxious expression. Physical examination negative, except for the above description. On admission, at 9:30 p.m., her temperature was 97.6, pulse 140, respiration 24. Active bleeding from vagina.

We reached the patient at 10 p.m., and found her in a very precarious condition. Her systolic B. P. was then 75 mm., and her pulse was 152 and very weak. The patient was removed to the ward treatment room, and her cervix and vagina were packed, and 1-2 c.c. of pituitrin given. No operative procedure was attempted due to the condition of the patient.

The patient was then given 700 c.c. of a 5 per cent glucose in her vein in order to tide her over while we were seeking a donor for a transfusion.

At 11 p.m., a suitable donor having been found, she was given 250 c.c. citrated blood.

Foot of bed elevated 12 inches, and external heat applied. Shortly afterwards, the patient started to vomit; but from 1 a.m. until 4 a.m., she rested quietly.

At 4 a.m. she again complained of nausea, was very restless, and had a pulse of 152, very weak and irregular. No more vaginal discharge.

At 8 a.m., she was given 700 c.c. of 5 per cent glucose by hypodermoclysis. During the entire day she was very restless and vomited a great deal. Blood pressure dropped to 70 mm. She was given various stimulants by needle.

During the afternoon she became very much worse, with shallow breathing, etc., the very picture of impending death from shock.

It was then that the report of a recently catheterized specimen of urine showed acid reaction and acetone ++++. As she was getting glucose by hypodermoclysis at the time, we gave her 5 units of insulin. This was repeated in about 30 minutes.

In the meantime we were preparing to give glucose and insulin by vein, and from 4:30 p.m. until 6 p.m. she received 500 c.c. of a 10 per cent glucose with 20 units of insulin.

At 9:30 p.m. an intravenous drip of saline was started, the patient receiving 3,000 c.c. after 5 hours.

At midnight, the patient showed no more acetone in a catheterized specimen of urine, or in frequent subsequent specimens.

From this time on, there has been no more vomiting, her pulse began to increase in volume, and became moderately slow and regular. She was able to retain increasing amounts of fluid, gruels and cereal. The patient remained in the hospital for ten days. When discharged, she was on full diet with no nausea or vomiting, and fully recovered in every respect, except for a slight anemia.

The above case, in our opinion, is a remarkable one, in as much as it illustrates the value of glucose and insulin in combating that which is commonly called shock.

Here we have a patient with practically every one of the classic symptoms of shock, viz: A person in shock is usually found in a state of complete muscular relaxation and if movements are made, they are feeble and irregular. The face is pale and drawn, the pupils dilated, sweating is often profuse, the reflexes are slight, consciousness is usu-

ally present, but there is a diminished sensibility and mental activity. The respirations are feeble, irregular and sighing. The pulse is small, frequent and dicrotic, owing to the low blood pressure. The skin is cold and the temperature subnormal, plus vomiting and acetone bodies in the urine.

Let us for a moment consider Yandell Henderson's Theory of Shock: Acapnia, or deficiency in CO<sub>2</sub>, removes a most important stimulus from different nerve centers. The breathing becomes shallow and occasional, the blood pressure falls and the heart beats more rapidly. The objections to this theory are many, chief among which is the fact that shock should then be prevented by artificially supplying CO<sub>2</sub>, which is not the case.

Now let us consider that which is called acidosis; according to Victor Myers: The term acidosis, although originally coined by Naunyn to apply to the ketosis of diabetes, has come to be used in a much broader sense with the development of our knowledge of this subject.

A number of different criteria have been suggested as a measure of the degree of acidosis: (1) lowered carbon dioxide combining power or content of the blood; (2) lowered alveolar carbon dioxide tension (3) decreased affinity of hemoglobin for oxygen; (4) reduced alkalinity of the blood (Sellard's test); (5) increased hydrogen-ion concentration of the blood; (6) increased intensity of urinary acidity (hydrogen-ion concentration), and (7) the retention of alkali by the body in cases in which the kidney is capable of rapidly excreting an excess of alkali. Yandell Henderson has also suggested the very simple test of holding the breath.

Shock has been defined as a condition in which the systolic pressure remains below eighty.

The protection of the body from a dangerous change toward acidulation of the blood, lies in the sodium bi-carbonate of the plasma. The Van Slyke method of determining the plasma bi-carbonate, offers a simple means of ascertaining whether non-volatile acid has been unduly developed, and by uniting with the sodium and driving off the CO<sub>2</sub>, has diminished this "buffer salt."

The normal is 50 to 55 volumes per cent.

Cannon in 47 determinations of CO<sub>2</sub> capacity, in cases of very low blood pressure, shows the following:

No. of Cases.	C O <sub>2</sub> Capacity
7.....	50—59 (average 53)
26.....	40—49 (average 44)
8.....	30—39 (average 35)
6.....	20—29 (average 24)

From the above, Cannon says, it is clear that though acidosis is not necessarily present in conditions clinically diagnosed as shock, in the majority of instances, it does exist and may be extreme.

The most striking lesson to be learned from this case, is the fact that in insulin we have a valuable adjunct to our medical armamentarium other than its value in the treatment of diabetes.

A careful study of the case report will show that no marked change for the better was noted until the administration of the insulin, in spite of a large intravenous infusion of glucose followed by a transfusion, and this in turn followed by glucose by hypodermoclysis. No change in the low blood pressure or relief from the vomiting and acetonuria was noted until the administration of the insulin.

Just how the insulin acted in the particular case cited, is not quite clear. Its action was, perhaps, twofold: (1), In permitting the entire consumption by the body of the glucose (as shown by the absence of sugar and acetone in the urine shortly afterwards), thereby combatting the acidosis, and (2), as has been suggested, it enabled the body to hold fluids, which otherwise would have been excreted by the kidneys, due to their stimulation by free glucose.

From a study of clinical symptoms of this case, and the result, do not the two seem to be strikingly similar? We are told that a state of acidosis is the result of starvation, that the carbon-dioxide reserve of the body is diminished, etc. We are likewise told by Henderson that shock is due to a loss of  $\text{CO}_2$ , and by Cannon, that an acidosis is present in a large majority of cases of very low blood pressure persisting over a period of time. Rather a striking similarity, we should say.

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Cannon, W. B., *Traumatic Shock*. (In Keen's *Surgery*, vol. 7:296-315, 1921.)

## FEEDING PROBLEMS OF THE FIRST MONTH\*

C. J. BLOOM, M. D.  
NEW ORLEANS

The general practitioner in his daily routine realizes his limited time is inadequate to review the medical literature concerned with the voluminous subject matter of the feeding problems of infants and children.

\*Read before the Louisiana State Medical Society, Opelousas, April 22-24, 1924.

So many changes have been made; so many "fads and fancies" introduced, and so many text books printed, that one finds it rather difficult to select "just what is the correct procedure in the handling of these cases."

This paper includes the deduction made after twelve years of intensive study, and is the plan adopted by the writer in his private and hospital practice at this time.

### *The Newly Born Record*

When possible make a complete examination of the newly born infant on the day of its birth. Copies of said record are herein reproduced. Charts Nos. 2 and 3. Pay special attention to the daily weighing of the infant for the first fourteen days.

### *Methodical Feeding*

### *Rules and Regulations*

In the past, students of Pediatrics have been taught that in the physical development of an infant, it is quite common for every newly born infant to exhibit an initial loss in weight during the first week of its life, and providing the amount does not exceed ten percent of its birth weight to consider same as normal; the birth weight being regained by the fourteenth day.

Believing this statement was incorrect and feeling that even though there may be many causes producing such a marked loss in weight—has led me to observe the included cases as described in detail in Table No. 1. After the birth of the infant, many clinicians have no definite routine concerning the time of feeding nor to the relative number of minutes per feeding. This matter is left to the discretion of the child, who remains unfed until such a time as his fretfulness and crying will warrant the attention of all concerned. For this reason methodical feeding-rules and regulations have always been paramount with me in the care and feeding of the newly born. The baby is put to the breast every four hours during the first twenty four hours; every three hours during the second day; every two and one-half hours between six a.m. and nine p.m. and twice during the night between nine p.m. and six a.m. during the third day; and every two hours during the day from six a.m. to ten p.m. and once during the night from ten p.m. until six a.m. during the first month.

There are a few exceptions that would alter this feeding plan; namely, (1) an abundant supply of milk, rich in constituents in the case of a very small baby;





NEWLY BORN RECORD

No. ....	NAME .....	Sex .....	Obstetrician .....	[ MOTHER FATHER
Date and Hour of Birth .....	First Examination .....			
Term { Full .....	Delivery: (a) Normal .....	(b) Caesarian .....	(c) Instrumental .....	
Premature .....				
Physical Examination	1st day .....			
Length of Body .....	2nd day .....			
Length of Legs .....	3rd day .....			
Circumference .....	4th day .....			
Anterior Fontanelle .....	5th day .....			
Sutures .....	6th day .....			
Abnormalities .....	7th day .....			
Face .....	8th day .....			
Neck .....	9th day .....			
Circumference .....	10th day .....			
Objective .....	11th day .....			
Physical .....	12th day .....			
Circumference and Organs .....	13th day .....			
General .....	14th day .....			
Abdomen { .....				
Extremities { .....				
Sexual Organs .....	Mother: (1) General Health .....			
Cyanosis .....	(2) Breasts .....			
Cord: Dropped .....	(3) Bowels .....			
Discharge .....	Diet: .. Omit—Tea, Excessive Sweets and Coffee, Canteloupe, Water-			
Tuberculosis .....	melon, Bananas, Grapes, Cauliflower, Plantans, Cabbage, Red			
Questionable Symptoms .....	and White Beans, Cucumbers, Tomatoes, Sweet Potatoes			
	and .....			

CHART NO. II

The succeeding feedings must be given at a specified time from the beginning of the preceding feeding.

In this series the so-called initial loss or Post Natal loss of weight curve has been replaced by an increase in weight on the tenth day. *Average weight first day seven pounds four ounces; average weight third*

*day seven pounds one-half ounces; average weight seventh day seven pounds three ounces and tenth day seven pounds five ounces.* Note that the maximum loss of weight was three and one half ounces, or less than one per cent of its birth weight.

The Post Natal loss of weight in infants is attributable to lack of or no nourishment

and it is particularly noted in excessively large children and it is more marked during the colder than during the warmer months of the year. Mechanical shock during delivery and excessive loss of heat due to improper clothing and lack of attention are other factors influencing this initial loss.

This series of one hundred thirty-six cases, consisted of seventy-two males and sixty-four females. Seventy-four cases or fifty-four and one-half per cent, gained by the tenth day; fifty cases or thirty-six and five-tenths per cent showed an appreciable loss by the tenth day, and 12 cases remained stationary in weight during the same period of time. By the fourteenth day, ninety-four or sixty-nine per cent had exhibited an increase in weight; therefore, only thirty-one per cent of the total number of cases showed a loss at the end of fourteen days. A rather significant deduction—twenty-three cases or sixteen per cent gained consistently through the tenth day.

These cases were all born in free service of the Touro Infirmary during the years of 1918-1920, and received the attention of ward nurses alone. From the above, it is evident that the short interval of feeding is the method of choice.

In order to understand the food requirements of the newly born, a few introductory remarks relative to metabolism are now discussed.

#### Computed Metabolism

The energy quotient as applied by Heubner is the number of large calories per kilogram of body weight that are necessary for daily growth. The fact that analysis of breast milk varies within wide limits necessarily influences a corresponding fluctuation in its caloric values. The following are the computed energy quotients as accepted by different authorities:

Heubner allows 100 calories per kilogram (2.2 pounds);  
Schlosman, 110 calories;  
Feer from 86 to 104 calories;  
Krammer, 50 plus calories;  
Siegert, 80 calories;  
Czerny and Keller, 70 calories;  
Oppenheimer, from 111 to 142 calories.

Beck gives the following figure as an average energy quotient to breast fed infants, one to twelve weeks, 107 calories.

Therefore—with a given gastric capacity of one and one-half to three ounces knowing the number of feedings received, and computing the calories per ounce of milk, as per Fraley's Formula 2. Fat plus Protein plus carbohydrate times 1 1-4 equals amount of calories ( $2F + C + P \times 1.4$ )—

also the number of calories required by a given infant in twenty-four hours—all will tend to prove that the short interval of feeding is practical, feasible and the forerunner of a well trained and well nourished child and a contented mother.

1. Metabolism of infants after taking food, is always higher than it is in the same infant while fasting.<sup>1</sup> Experimentally, this brings the additional proof that insufficient food reduces the carbondioxid excretion. (Howland).

2. After eighteen hours of fasting, acetone soon appears in the urine in a considerable amount; therefore it appears that in such an infant the finding of acetone should be considered abnormal. (Schlossmann and Murschhauser).

This perhaps explains the inanition or starvation fever so often noted in apparently healthy children—more often in the case of large infants—where a few days after birth (second to sixth as a rule) with negative findings, the child will develop high fever—sometimes reaching 106 degrees Fahrenheit—an associated restlessness and a crying infant might aid in the diagnosis of this clinical entity. *Do not purge freely and do not starve—food is wanting.*

Complement your breast feedings with from one-half to two ounces of the following mixtures in the strength of five per cent.

Dextrose .....	3.739	} Calories
Lactose .....	3.737	
Saccharose .....	3.957	

#### A Few Practical Suggestions.

1. The best method of hastening the return of the milk in a mother is by emptying the breast as completely as possible. Many a mother has discontinued the breast as a means of feeding her young one because the attempt was given up at a time when the milk was late in appearing or else the quantity was absent. The so-called running in or milk day, is generally the third—at times it goes beyond this period and in a few instances, appears before said time. By the plan mentioned in the previous paragraph, the writer believes that the running in period can be shortened and that the amount of milk can be increased to such an extent that the so-called initial loss weight in curve will be eliminated entirely.

2. Treat the mother as well as the child—in the former let it be psychological, whereas in the latter, medical. Encourage the fact that she will nurse her child and do not permit of her weaning the child unless any of the accepted reasons for weaning

are apparent. Restrict her diet, as per memoranda of The Newly Born Record, and limit her purgatives to the mineral oils. Particularly stress the necessity of exercise and mental diversion, and also the detailed care of the breasts.

3. Do not acclimate the infant to numerous drugs and drastic purgatives even though the movements temporarily may be many and constituents abnormal. Allow nature to adjust the one to the other.

4. If vomiting is a prominent symptom, think of the following:

- (a) Too much; (b) Too often; (c) Too quick; (d) Too strong and (e) Pressure on the abdomen.

5. The amount of milk received per feeding can be estimated by the difference of weight obtained by weighing before and after feeding. An early morning and a late

evening feeding will give you an average amount received at these respective times.

6. Remember that periodical crying, principally in the late afternoon and night is one of the signs of underfeeding and not colic. The other signs are stationary weight, constipation and restlessness.

*Conclusions*

1. By following the precedent of placing the infant to the breast from the first day, etc., the so-called Post Natal Loss Curve can be obviated.

2. By calculation and metabolic findings—the short interval of feedings is the method of choice. The infant is better satisfied, the gain is more appreciable, the habits are better formed and the baby better developed, and the mother—more contented.

No. of Patient	Birth Weight lb. oz.	Weight at end of Third Day lb. oz.	Weight at end of Seventh Day lb. oz.	Weight at end of Tenth Day lb. oz.	Weight Lost - or gained * in Ounces at end of Tenth Day	Birth Weight Retained Through-out Tenth Day	Birth Weight Regained on Day	Sex (Male=M.; Female=F.)
1	6-8	6-8	6-3	6-3 3/4	* 3/4	No	10th	M
2	7-7	7-7	7-11	7-11	* 4	No	5th	F
3	6-4 1/2	6-5	6-5	6-10	* 5 1/2	Yes	6th	F
4	7-14	7-6	7-12	8-0	* 2	No	10th	F
5	7-5	7-5 1/2	7-8	7-14	* 9	Yes	...	M
6	7-5	7-2	7-2	7-10	* 5	No	7th	M
7	6-14	7-6	7-13	8-4	* 6	Yes	...	M
8	8-12	8-1	8-10	8-10 1/2	- 1 1/2	No	10th	F
9	6-9	6-7	6-11	6-11	* 2	No	7th	M
10	6-14	6-13	6-13	7-2 1/2	* 4 1/2	No	8th	M
11	6-12	6-12	6-13	6-13	* 1	Yes	...	F
12	9-0	8-15	9-4	9-4	* 4	Yes	...	M
13	5-12	5-13	6-2	6-8	* 12	Yes	...	M
14	7-0	7-0	7-3/4	8-0	* 16	Yes	...	F
15	5-0	4-14	4-12	5	-	No	10th	F
16	9-4	9-3	9-6	9-6	* 2	No	8th	M
17	6-6	6-0	6-6	6-8	* 2	No	7th	F
18	9-4	9-3	9-5	9-6	* 2	No	4th	M
19	7-12	7-11	7-11	7-12	-	No	8th	M
20	6-0	6-0	6-7	6-7 1/2	* 7 1/2	Yes	...	F
21	10-3	10-8	11-0	11-3 1/2	* 16 1/2	Yes	...	M
22	7-12	7-9	8-8	8-10	* 14	No	5th	M
23	9-4	9-6 1/2	9-8	9-14	* 10	Yes	...	F
24	8-14	8-15 1/2	8-14	8-15 1/2	* 1 1/2	Yes	...	F
25	7-5	7-3 1/2	7-6	7-6	* 1	No	7th	M
26	10-6	10-5 1/2	10-6	10-6	..	No	7th	M
27	6-2	6-0	6-7	6-7	* 5	No	4th	F
28	7-11	7-10 1/2	7-10	7-11 1/2	* 1 1/2	No	9th	M
29	8-0	8-2	8-2 1/2	8-3 1/2	* 3 1/2	Yes	...	M
30	7-1 3/4	7-2	7-4 1/2	7-6	* 4 1/4	Yes	...	F
31	6-8	6-0	6-8	6-12	* 4	No	6th	F
32	6-8	6-0	7-0	7-0	* 8	No	6th	F
33	8-6	8-4	8-5	8-6	..	No	8th	M
34	4-5	4-4	4-5	4-8	* 3	No	7th	M
35	8-5	8-4	8-6	8-6	* 1	No	6th	F
36	9-4	9-5 1/2	9-2	9-6 1/2	* 2 1/2	No	10th	M
37	7-12	7-12	7-12 1/2	7-13	* 1	No	6th	F
38	5-14	5-13	6-8	6-6 3/4	* 8 3/4	Yes	...	F
39	8-2	8-1	8-3	8-5	* 3	No	5th	M

No of Patient	Birth Weight lb. oz.	Weight at end of Third Day lb. oz.	Weight at end of Seventh Day lb. oz.	Weight at end of Tenth Day lb. oz.	Weight lost - or gained * in Ounces at end of Tenth Day Ounces	Birth Weight Re- tained Through- out Tenth Day	Birth Weight Re- gained on Day	Sex (Male=M.; Female=F.)
40	6-14	6-13	6-15	6-15	*1	No	4th	F
41	7-14	7-10	8-0	8-0	*2	No	5th	M
42	6-7½	6-8	6-11	6-11	*3½	Yes	...	F
43	7-8	7-10	7-9	7-4	-4	No	11th	F
44	6-4	6-3	6-5	6-5	*1	No	6th	M
45	8-8	8-7	8-10	8-10	*2	No	5th	M
46	8-5	8-6½	8-4½	8-5½	*½	No	8th	M
47	8-11½	8-10½	8-10½	8-12	*½	No	8th	M
48	6-1	5-10	6-0	6-2	*1	No	8th	F
49	6-8	5-12	6-4	7-0	*8	No	8th	M
50	7-8	7-8	7-7	7-7	-1	No	X	M
51	7-2	7-2	7-2	7-3	*1	Yes	...	F
52	6-12	6-13	6-14	6-14	*2	Yes	...	M
53	9-1	9-1	9-2	9-2	*1	Yes	...	F
54	5-12	5-12	5-13	5-13	*1	Yes	...	F
55	6-3	5-3½	5-5	5-5	*2	Yes	...	F
56	7-2	7-2½	7-3	7-3½	*1½	Yes	...	M
57	7-12	7-2	7-6½	7-7½	*4¾	No	X	M
58	7-7	7-2½	7-8	7-9	*2	No	7th	F
59	6-0	5-15½	6-15	6-15½	*15½	No	5th	F
60	8-3	8-5	8-7	8-8¼	*5¼	Yes	...	M
61	6-7	6-6½	6-11	6-12	*5	Yes	...	F
62	6-6	6-6	6-9	6-12½	*6½	Yes	...	F
63	8-14	8-12¼	8-14½	9-6	*8	No	6th	M
64	6-4	6-0	6-6½	7-2	*14	No	5th	F
65	8-0	7-12	8-4	8-5	*5	No	5th	F
66	7-6	7-3	7-12	8-5	*15	No	6th	M
67	6-7	6-5	6-5	6-8	*1	No	9th	M
68	8-2¾	7-12	8-4	8-7¼	*4½	No	7th	M
69	8-4	7-12¾	8-4½	8-4	..	No	7th	F
70	6-6	5-13½	6-7½	6-12	*6	No	6th	F
71	8-9	8-2	8-4	8-11	*2	No	9th	F
72	5-7	5-0	5-10	5-10	*3	No	6th	F
73	8-7	7-14	7-14	8-2¼	-4¾	No	X	F
74	6-2	5-10	5-14	6-2	..	No	10th	M
75	9-0	8-11¼	9-3	9-2	*2	No	7th	M
76	8-8	7-14	8-6	8-10	*2	No	8th	F
77	10-0	9-11	9-9	9-11	-5	No	X	M
78	7-2	6-6	7-1½	7-2	..	No	10th	M
79	7-0	6-6	6-8	7-0	..	No	10th	M
80	7-11	7-5	7-8	7-12	*2	No	10th	F
81	7-0	6-10	7-2	7-11	*11	No	6th	F
82	8-3¼	7-6	8-9	8-14½	*10¼	No	5th	M
83	8-6	8-2	8-6	8-10	*10	No	7th	M
84	7-0	6-13	6-6½	7-0	..	No	9th	M
85	7-12	7-9½	7-5	7-12	..	No	10th	M
86	7-10	7-5	7-15	7-12¾	*2¾	No	7th	M
87	7-9	6-8	6-8	6-14½	-4½	No	X	F
88	7-12½	7-1¾	7-2	7-8½	-4	No	11th	F
89	9-8	9-2	8-14	9-5	-3	No	11th	M
90	9-3	8-5½	8-13	9-3¼	*¼	No	10th	M
91	9-8	9-2	8-14	9-5	-3	No	11th	M
92	7-7	6-12	6-12	7-4	-3	No	12th	F
93	7-0	6-10	7-3	7-4	*9	No	4th	M
94	8-11½	8-2	8-12½	8-12½	*1	No	7th	M
95	9-7½	9-0	9-3	9-4	-3½	No	10th	M
96	7-12	7-10	7-8	8-2	*6	No	8th	M
97	5-9	4-14	5-5	5-9½	-½	No	9th	F
98	6-12	6-8	6-7	6-15	*3	No	10th	F
99	7-8	7-4½	7-7½	7-7	-1	No	11th	F
100	6-12	6-10	6-10	6-8	-4	No	X	F
101	8-15	8-5	9-0	8-15	..	No	11th	M
102	6-11	6-9	6-6	6-7	-4	No	X	F
103	5-13½	5-12	5-13	5-12	-1	No	8th	M
104	6-11	6-9	6-8	6-8	-3	No	X	F

Ether in 1846 on a patient operated at Mass. Gen. Hospital by Dr. J. C. Warren. Dr. Warren said "You have seen something that will go around the world."

Will the untold thousands operated since that time deny the civilizing effect of the physician in this instance?

Without Pasteur, (French) Lister, (English) and Long and Morton (American) surgery would not be today what it is; and yet an anonymous gentlemen hurls unwarranted stigmatizing calumnies at our profession.

The world waited for Oliver Wendell Holmes, to coin the terms anesthesia and anesthetic.

Has American civilization suffered because of the lethargy of the profession since the initial work of Long and Morton? What has our distinguished critic to say of the work of Gwathmey and later the original research of Luckhardt which has given the world Ethylene, the latest and to date the safest anesthetic.

In the Hall of fame of Gynecology the American surgeons form a conspicuous group.

In spite of the "commercial cunning" thrust we look with pride upon the achievement of Ephraim McDowell, hailed by all "the Father of Ovariectomy."

Oliver Wendell Holmes wrote in answer to an invitation to be present at the dedication of the McDowell Monument: "Among the births of the century this (ovariectomy) is a twin with myself. I thank God that the other twin will long outlive me and my memory, carrying the light of life into the shadows of impending doom, the message of hope into the dark realm of despair; opening the prison to them that are bound and giving them beauty for ashes, the beauty of a new-born existence even of youthful maternity in place of the ashes for which the inevitable urn seemed already waiting. I am glad that this great achievement is to be thus publicly claimed for American surgery."

In the Frauenklinik in Berlin, there is only one ornament in the amphitheatre and that is a medallion of McDowell.

What effect this contribution has had on civilization we look to our esteemed critic for an answer. The balance of the world has already answered.

J. Marion Sims, Emmet and Kelly following in the foot-steps of the immortal Ephraim McDowell have contributed to the comfort and well-being of woman-kind suf-

ficient to justify their place among immortals of the world.

It is generally admitted that our own esteemed colleague Professor Rudolph Matas has contributed to the advancement of vascular surgery more than anyone for centuries. The most malicious would not consider this in the light that this anonymous critic has spoken. The work of Matas will stand as an everlasting monument to American genius.

The late Dr. Halsted has left his impression on civilization not only through his work in this field, but in the development of modern aseptic technic.

Can it be said that it is not a distinct civilizing influence when the disciples of great leaders like Halsted, Matas, Murphy and Coley, inspired by their teachings, influence the thought and lives of so many in this and other lands.

Brophy, Villary Blair, Davis and Thompson of Galveston, in the field of plastic surgery have contributed real advances to human knowledge.

Scarlet fever we hope will loose its terrors through the efforts of the Doctors Dick.

The plasmodium of malaria has been cultivated by Bass.

Yellow fever has almost become extinct through the work of Reed, Carroll and Lazar.

Gorgas, an American physician was able through the application of sanitation to make possible the construction of the Panama Canal. Had foreign money and brain failed to accomplish the same feat?

Men could not live on the Canal Zone until a modest, sincere, intellectual giant in the person of an American physician applied scientific sanitation. Was that folklore or ritual?

Flexner has produced poliomyelitis experimentally.

Crile, through his laboratory work, has given the world the foundation stone on which has been built our present conception of shock. Whatever differences in opinion have arisen since his original enunciation it is to the credit of American medicine that the idea originated in the brain of an American doctor.

Henderson, Seelig, Cannon, Ewing and many others have contributed along this line.

The research laboratories of the Rockefeller Institute, Johns Hopkins University, Tulane and many other similar institutions

bear witness that the statements of the critic are unworthy of publication.

Are our research laboratories adding daily to our knowledge? Are our great institutions such as the American College of Surgeons adding to our civilization? Is it "commercial cunning" which encourages men to work to bring comfort where pain and suffering are entrenched?

Publishers should be encouraged to have material analyzed that their publication will reflect credit on them.

Our critic would do well to consider Studley's comment "People who lead busy lives never find to have hysterics."

#### SOME RECENT MEDICAL PROGRESS

It seems that work on scarlet fever—real valuable, practical work—by Dick and Dick and by Dochez and others, has occupied the center of the stage in medical investigation for the past year or more and it may truly be written down as the best advance in medical progress for 1924. Work on the definite streptococcus, making of the tests, successful immunization and, now, claims of a practical and successful serum, analogous to the anti-diphtheritic, followed in such quick succession, the announcements of which almost made one dizzy.

Now comes Prof. Collip, of the University of Alberta, Ontario, Canada, one of the men who assisted Banting in perfecting insulin; he has isolated a definite hormone from the parathyroids, which is effective only by needle (like insulin) and which causes immediate cessation of tetany in para-thyroidectomized dogs; this hormone has been found to have a wonderful effect on the calcium metabolism in the body; we do not know as yet just what we may expect but we predict that, before another year passes, this will be perfected and its use will supplant that of the unknown-value, variable and indefinite parathyroid preparations for use, by mouth—just as insulin has supplanted the use of pancreatic hormones (so-called) for oral administration. Some of the diseases in which it may prove of incalculable value are: asthma, hayfever, tetany, sprue, pernicious anemia, pellagra.

With these advances fresh in mind, we may truly ask: "What next?"

#### THE LATIN-AMERICAN VISITORS

During the latter half of March the state had the pleasure of entertaining ten representatives of public health activities from

the South American countries and Mexico. The members of this group are:

Dr. Pedro de Alba Alvarez, Professor of Clinical Therapeutics, Military Medical School, Mexico.

Dr. Rafael Alvarez, Physician and Surgeon, Bacteriologist of the National Laboratory of Cuba.

Dr. Andres Gubetich, Delegate to the Seventh Pan-American Sanitary Conference, Paraguay.

Dr. Carlos R. Larde-Arthes, Chief of the Section of Public Health of Salvador and Professor of Pathology of the National University of Salvador.

Dr. L. Garcia Maldonado, Member of the Faculty of Medicine of Caracas, Venezuela.

Dr. Emygdio Jose de Mattos, Medical Officer of Health, Brazil.

Dr. Nunez, Delegate to the International Interchange, Costa Rica.

Dr. Rafael Schiaffino, Adjunct Professor of Hygiene, Uruguay.

Dr. Juan Francisco Valega, Delegate to the International Interchange, Peru.

Dr. Alberto Zwanck, Associate Professor of Hygiene of the Faculty of Medicine, Buenos Aires, Argentine Republic.

These distinguished gentlemen are Delegates from their countries and are traveling under the auspices of the League of Nations. Dr. Louis Destouches of the National Committee of the League is in charge of the party.

They are especially interested in the various methods of malaria control, in Sanitation work, in the care of the sick and in Child Hygiene.

The first state to be visited in this country was Louisiana. While here their interests were centered in the control work being carried on at Patterson, in the model dairies and in the methods employed for inspecting milk, food, fruit, meat. They visited the Leprosarium at Carville and also a number of cities inclusive of Shreveport throughout the state.

From Louisiana the party left for Mississippi with the intention of observing closely the full time county health organization. They apparently went from Mississippi to Alabama where the State Health Officer will demonstrate the work done in malaria, typhoid fever and hookworm control.

Washington is expected to be the next objective. Here they will be welcomed by Surgeon-General Cumming and under his

direction will be introduced to the complications of federal health administration.

The party will also visit Baltimore and they expect to spend ten days in New York city. Here again they will devote their time to the study of municipal sanitation, laboratory methods, hospitals and the activities of the federal government in the

European countries before returning to their respective occupations.

There is no question but what this interchange idea of the League of Nations is an excellent one. It brings about a better understanding between the countries. The hospitality which has been shown these men will not be forgotten and the informa-



THE SANITARY INTERCHANGE OF CENTRAL AND SOUTH AMERICAN HEALTH OFFICIALS UNDER THE AUSPICES OF THE LEAGUE OF NATIONS

Photograph taken in New Orleans, March 20th, 1925.

Reading from left to right, rear row: Dr. L. Garcia Maldonado, Physician-Surgeon of the Faculty of Caracas, Venezuela; Dr. Louis Destouches, League of Nations, Geneva; Dr. Rafael Alvarez, Bacteriologist of National Laboratory, Havana, Cuba; Dr. Emygdio Jose deMattos, Sanitary Inspector, National Department of Rio de Janeiro, Brazil; Dr. Francis H. McCrudder, Medical Staff of the New England Life, Massachusetts; Mr. J. H. O'Neill, Sanitary Engineer, Louisiana State Board of Health; Dr. Pedro de Alba, Professor of Therapeutical Medical Clinic, Military Medical School & Hospital, Mexico City. Front row: Dr. Alberto Zwanck, Medical Officer of Health, Buenos Aires, Argentine Republic; Dr. Carlos R. Larde-Arthes, Chief of Bureau of General Direction of Public Health, San Salvador, El Salvador; Dr. Juan Francisco Valega, Chief, Practical Work, Faculty of Medicine, Lima, Peru; Mrs. Angelita Galvez de Zwanck, Buenos Aires, Argentine Republic; Dr. Oscar Dowling, President, Louisiana State Board of Health; Dr. Rafael Schiaffino, Professor of the Faculty of Medicine of Montevideo, Uruguay; Dr. Andres Gubetich, Professor of the Faculty of Medicine of Asuncion, Paraguay.

regulation of quarantine and immigration at Rosebank and Ellis Island.

It is understood that after visiting the principal points in the United States, the doctors will also investigate and study the methods by which the Canadian authorities regulate their health problems. It is probable that from Canada they will visit the

tion which they will derive from the study of our institutions will go far toward clarifying the misconceptions which we have of their ways of living and their misunderstanding of our ways of existence. This may not occur with one visit, probably not with several, but in any event it will pave the way toward amicable relations both of



a political as well as of a commercial kind which will redound to the benefit of both the United States as well as her Latin American neighbors.

**DR. WILLIAM J. MAYO**

In the forenoon of Tuesday, April 7, the Miles Amphitheatre of the Charity Hospital was crowded to full capacity with the medical student body of the Tulane University and the members of the Visiting Staff and other visitors who had assembled to hear a lecture by Dr. William J. Mayo. The eminent surgeon was greeted with the warm and enthusiastic welcome which is accorded him whenever he makes his appearance in New Orleans.

Dr. Mayo responded in his usual happy vein to the fittingly complimentary remarks of Dr. Matas, who in his introduction referred to the great achievements of "Dr. Will," as he is affectionately known to his friends, and to the Mayo Foundation at Rochester as "the greatest and most unique human repair shop on earth—the pride of America and the envy of the outside world." Dr. Mayo's discourse dealt most interestingly and instructively with the more recent contributions of biochemistry and physiology to the problems of nutrition and metabolism, as they related to

the preparation of surgical patients, and safeguarding them before, during and after operations in toxic states, who, without such preparation and after care, would incur the gravest risks. He referred especially to the changed attitude of the surgeon in the presence of diabetic patients, who were no longer denied the benefits of surgery since the advent of Iletin and the better knowledge of the dietetic measures that are utilized to counteract the dangers of acidosis. He referred to the still greater danger of alkalosis in other conditions; to the progress accomplished in the treatment of the biliary toxemias of jaundiced patients; to the hemophilic and purpuric risks, all of which had been immensely benefited by the recent advances in biochemistry and the physio-pathology of the blood and the blood making organs. In all of this he displayed an intimate acquaintance with the latest acquisitions of contemporary scientific research in the chemistry of nutrition and metabolism that spoke eloquently for the culture, versatility and breadth of view of the lecturer and of the modern surgeon, who is no longer satisfied with the pure manual accomplishments of his art, but who seeks and finds, in every forward step of the collateral and ancillary sciences, the material for the attainment of his life saving mission.

# LOUISIANA STATE MEDICAL SOCIETY

## *Presidential Address\**

*Dr. C. V. Unsworth, New Orleans*

Medical Conventions like meetings of other professions and callings are primarily intended as gatherings where an accounting of achievements or failures may be had.

It is customary in medical meetings that subjects of a more or less technical nature, only relatively interesting, and sometimes, indeed, boring to lay persons are discussed.

On account of the great mission of the medical profession in preventive medicine and the great interest that the public has shown in this branch it has become a fixed policy with medical organizations to have a meeting such as this to which the public is invited.

There are many reasons for this policy. The non-sectarian and open minded character of our profession makes it desirable that the public be in its confidence in return for the support and confidence that the people have always reposed in it.

This is a situation to be much desired, and having been obtained, to be dearly cherished, for after all, is not the public co-operation an evidence of the public's acknowledgment of a confidence begotten from a duty well done?

In these times, when a somewhat altered sense of public and private conscience has made easier the straying from beaten paths, especially when they are straight and narrow, there have arrived in our social system some rather distorted concepts of what constitutes success in life.

The opportunity for rapid accumulation of wealth by somewhat easy though not always safe methods has lured many a weak citizen to destruction, in his frantic grasping for what he hoped meant success.

Gold, throughout the history of the world, has always been an almost irresistible magnet which has drawn into its cold embrace the vapid individual who hoped to find in its tempting sheen the warmth of happy success.

Passion, the love of power, hatred and revenge have furnished the Will o' the Wisp to many actors in the play of life and they have reached the last act bitterly disappointed at the lack of the world's applause and dreadfully apprehensive of the judgment of the Great Censor beyond.

Indeed, if one would judge rather hastily at the apparent objectives of most of our fellow men, of all kinds and creeds, one would be indeed in a quandary to answer the questions—what are they driving at? What constitutes, in their minds, success?

Success is measured by different standards and is subject to different definitions. Social prestige, political preferment, financial affluence, religious contentment, any or all, may be the measures that are used for judgment and—after all—success—as far as personal impressions go, is a relative term.

In large gatherings or even in communities, an uninfluenced popular vote for the most successful citizen might be productive of peculiar results. Jack Dempsey would probably defeat Gen. Pershing. Peggy Joyce would no doubt defeat Evangeline Booth. Pasteur, Reed and Lazear would probably not even be considered successes,—for did not their work hasten their ends, and were they not poor in worldly goods?

In medicine, as I have intimated by my last references, the gauges of success must be somewhat different, lest we all be failures.

Hippocrates, the worthy descendent of Aesculapius, has said in the "Law" of Standard of Requirements for a Doctor, that "whosoever is to acquire a competent knowledge of medicine, ought to be possessed of the following advantages: a natural disposition; instruction; a favorable position for the study; early tuition; love of labor; leisure. First of all, a natural talent is required; for, when Nature opposes, everything else is in vain; but when Nature leads the way to what is most excellent, instruction in the art takes place, which the student must try to appropriate to himself by reflection, becoming an early pupil in a place well adapted for instruction. He must also bring to the task a love of labor and perseverance, so that the instruction taking root may bring forth proper and abundant fruits.

Instruction in medicine is like the culture of the productions of the earth. For our natural disposition is, as it were, the soil; the tenets of our teacher are, as it were, the seed; instruction in youth is like the planting of the seed in the ground at the proper season; the place where the instruc-

\*Delivered before the Louisiana State Medical Society, New Orleans, April 21, 1925.

tion is communicated is like the food imparted to vegetables by the atmosphere; diligent study is like the cultivation of the fields; and it is time which imparts strength to all things and brings them to maturity.

Having brought all these requisites to the study of medicine, and having acquired a true knowledge of it, we shall thus, in traveling through the cities, be esteemed physicians not only in name but in reality. But inexperience is a bad treasure, and a bad fund to those who possess it, whether in opinion or reality, being devoid of self-reliance and contentedness, and the nurse both of timidity and audacity. For timidity betrays a want of powers, and audacity a want of skill. There are, indeed, two things, knowledge and opinion, of which the one makes it a possessor really to know, and the other to be ignorant."

A doctor who has fulfilled these requirements and preserved these tenets can, we believe, be called successful. If wealth and immediate earthly plaudits are to be the gauges of success, then Pasteur, one of the greatest benefactors of the human race, in a physical way, and Jesus of Nazareth, the greatest benefactor, in a spiritual way, could not have been called successful—and yet, today, all creeds and all races acknowledge reverentially the Divine blessings their existences brought to human kind.

We must judge of success from a higher and nobler standard than the mere accumulation of wealth or the acquiring of temporal power, if the medical profession is to be raised from the stigma of failure. For the medical man on the average is far from wealthy and seldom seeks power. His work is fashioned and must be carried on as the great Nazarene has taught. He must feel that "the spirit of the Lord is upon" him. "To preach deliverance to the cap-

tives and sight to the blind, to set at liberty them that are bruised." He must follow the spirit of the Great Physician and when he has honestly done this, then, in the judgment of our profession, he is successful.

He may be sick and poor, and we believe him successful—for was not Pasteur such? He may be a crusader, and be met by unbelievers, and yet we know he is a success—for was not Jenner such? He may die obscurely and no tumult result from his death and yet we know he was a success—for did not Rickett do so?

My friends,—in medicine, the cardinal rule is the Golden Rule, and medicine is of necessity a calling to a life of self-abnegation and a devotion to duty and ideals, and when one of our number carries on earnestly, zealously and is completely imbued with the ideals which we have inherited from Hippocrates, he is, indeed, a success.

We cannot all be Galens, Pares, Pasteurs, Listers, Reeds or Murphys, but we can carry on with all that is in us and be successes.

The humblest country practitioner or city family practitioner may be, indeed, "a gem of finest ray serene," and mean more in the way of individual success, in the true sense, than the greatest and most heralded group of widely advertised surgeons in the world. Opportunity for fame may never come but we must remember that "they also serve, who stand and wait."

As Carl Schurz has beautifully penned it, "Ideals are like stars; you will not succeed in touching them with your hands, but like the sea-faring man on the desert of waters, you may choose them as your guide, and following them reach your destiny,"—and be successful.

# MISSISSIPPI STATE MEDICAL ASSOCIATION

## *Program of Annual Meeting*

Tuesday, May 12, 8 a. m. Crown Theatre, Meeting of Council and House of Delegates. Subsequent meetings will be arranged by the House.

Tuesday, May 12, 9:30 a. m.; 12 m.; 1:30 p. m.; 6 p. m., Crown Theatre.

### *Opening Exercises*

#### *Section on Eye, Ear, Nose and Throat*

1. Malignancy of the Naso-pharynx—D. C. Montgomery, Greenville.
2. General Diseases in which Aural Complications are Prone to Occur—N. S. Dickson, Columbus.

#### *Section on Medicine*

1. The Effects and Treatment of Constipation and its Relation to So-called Intestinal Auto-intoxication—James S. McLester, Birmingham.
2. The Infants' Pylorus: Spasm and Stenosis—F. G. Riley, Meridian.
3. Conclusions from the Correlation of Laboratory Findings, Clinical Symptoms and End-Results—L. L. Lippincott, Vicksburg.
4. Endarteritis Obliterans: Report and Demonstration of a Case—Louis W. Webb, New Orleans.
5. The Digestive System in Tuberculosis—W. A. Tommer, Sanitorium.
6. Blood Transfusion—A. C. Bryan, Meridian.
7. Hematuria—W. G. Kiger, Eaglebend.
8. Some Observations of the Diseases of the Chest in Children—Noel C. Womack, Jackson.
9. Focal Infection—S. E. Eason, New Albany.
10. Prostatitis: Its Relation to Focal Infection—H. W. E. Walther, New Orleans.
11. Focal Infection in the Dental Tissues—J. N. C. Moffat, D. D. S., Clarksdale.
12. The Relation of the Physician to Life Insurance—J. O. Segura, Jackson.
13. Pituitrin in Obstetrics—E. H. Linfield, Gulfport.
14. Non-Tuberculous Diseases of the Chest; with Lantern Slides—W. F. Henderson, Jackson.
15. Thymus Enlargement in Infants and Children; with Lantern Slides—Harvey F. Garrison, Jackson.
16. Physiological Effects and Therapeutic Effects of the Radio—Active Waters of the Hot Springs National Park in Arkansas in Diseases and Injuries Incident to the Military Service—Col. L. Mervin Maus, Hot Springs.
17. Insulin and Diabetes Mellitus—H. L. Rush, Meridian.
18. The Treatment of the Failing Heart—T. D. Bordeaux, Meridian.

### *Evening Session*

Tuesday, May 12, 8 p. m. Crown Theatre.

1. Invocation—Rev. O. S. Lewis, Biloxi.
2. Addresses of Welcome:  
On behalf of the City of Biloxi—Mayor J. J. Kennedy.

On behalf of the Harrison-Stone Medical Society—H. M. Folkes, Biloxi.

3. Response to Addresses of Welcome—Noel C. Womack, Jackson.
4. President's Address—Medical Progress and the Influence reflected on it by Organized Medicine—J. J. Haralson, Forest.
5. Annual Oration—The Abuse of Food—John B. Elliot, New Orleans.

### GENERAL MEETING

Wednesday, May 13, Session 9 a. m. to 12 m.; 1:30 p. m. to 4 p. m. Crown Theatre

#### **Section on Hygiene and Public Health**

1. The Prevention of Contagious Diseases of the Respiratory Tract—J. S. Ullman, Natchez.
2. Cancer: Some of the Problems Connected with its Control—Wm. F. Wild, Field Representative, American Society for the Control of Cancer, New York.
3. Two Years Work Under the Sheppard-Towner Act—Florence E. Kraker, Associate Director, Division of Maternity and Infant Hygiene, U. S. Dept. of Labor, Washington, D. C.
4. The Rabies Problem in Mississippi—C. R. Stingily, Jackson.
5. Full Time County Health Work—C. W. Garrison, State Health Officer, Little Rock, Ark.
6. Food Protection: With especial reference to Meat, Milk, Shellfish and Fruits—Oscar Dowling, State Health Officer, New Orleans.
7. Tuberculosis in Childhood—Henry Boswell, Superintendent State Tuberculosis Sanitorium.
8. Organization and Operation of a City Health Department—J. J. Durrett, Superintendent Dept. of Health, Memphis.
9. Partnerships in Health Work—Wm. R. Medden, Medical Asst., American Red Cross, Washington, D. C.
10. The Doctor's Responsibility to Motherhood—R. M. Adams, Tupelo.
11. Major Defects of Eye, Ear, Nose and Throat, as seen by the Memphis Marine Recruiting Station—Robin Harris, Memphis.
12. A. Practical Program for a Part Time County Health Officer—W. H. Frizzell, Brookhaven.

#### *Section on Eye, Ear, Nose and Throat*

9 a. m. to 1 p. m.

Hotel Avezel (Special Session)

1. Perinaud's Conjunctivitis—E. L. Posey, Jackson.
2. Intranasal Surgery; with relation to the Turbinates—Edley H. Jones, Vicksburg.
3. Infection of the Accessory Nasal Sinuses in Children—C. A. McWilliams, Gulfport.
4. A Technic for Ethmoidectomy—John R. Hume, New Orleans.
5. Thornwaldt's Disease—E. LeRoy Wilkins, Clarksdale.
6. Masteidectomy: with special attention to local Anesthesia in this Operation—S. M. Blackshear, New Orleans.
7. "Zinc Ionization" in the Treatment of Chronic Otitis Media—C. E. Granberry, New Orleans.

8. Radical Frontal Sinus Operations, with the least Amount of Deformity—Lucien S. Gaudet, Natchez.
9. Lye Legislation—E. F. Howard, Vicksburg.

## GENERAL MEETING

Thursday, May 14, Session 9 a. m. to 12 m.;  
1:30 p. m. to 4 p. m. Crown Theatre.

*Section on Surgery*

1. Operative obstetrics—A. G. Payne, Greenville.
2. Further Discussion of Gall Bladder Surgery—A. E. Gordon, Jackson.
3. A Review of a Series of Gall Bladder Operations—C. Jeff Miller, New Orleans.
4. The Treatment of Jaundice—S. H. Hairston, Meridian.
5. The Treatment of Post-Operative Infections of the Abdominal Wall—H. A. Gamble, Greenville.
6. The Chronic Appendix—Chas. T. Chamberlain, Natchez.
7. Some Conclusions in Regard to the Diagnosis and Treatment of Appendicitis—R. H. Foster, Laurel.
8. Local Anesthesia in Abdominal Surgery—Carroll W. Allen, New Orleans.
9. Some Difficulties in the Diagnosis of Early Pregnancy, from the Surgeon's Viewpoint—J. A. Crisler, Memphis.
10. Mercurochrome in Surgery—S. W. Johnston, Vicksburg.
11. Splenectomy for Certain Types of Anemia, with case report—A. Street, Vicksburg.
12. Sacral and Para-Sacral Anesthesia—E. H. Galloway, Jackson.
13. Unrecognized Pellagra a serious Surgical Handicap: report of cases—L. B. Hudson, Hattiesburg.
14. Ectopic Gestation—F. M. Sandifer, Greenwood.

## WOMEN'S AUXILIARY

Riveira Hotel

Tuesday, May 12, 1925.

8 a. m.—Registration (Avezel Hotel)

3:30 p. m.—Executive Board.

Wednesday, May 13, 1925.

9:30 a. m.—Call to order and invocation.

Addresses of Welcome:

On behalf of Woman's Auxiliary of the Harrison-Stone County Medical Society—Mrs. Margaret Carraway, Gulfport.

On behalf of the City of Biloxi—Mrs. G. R. Carroll, Biloxi.

Response to Addresses of Welcome—Mrs. H. R. Shands, Jackson.

Roll Calls.

Appointment of Committees.

Reports.

Address: The Value of a Woman's Auxiliary to the County Medical Society—F. J. Underwood, Jackson.

12 m.—Adjournment.

12:30 p. m.—Reveira Hotel.

Report of Woman's Auxiliary A. M. A.—Mrs. S. Johnston, Jackson.

Report of Auxiliary Southern Medical Association—Mrs. D. J. Williams, Gulfport.

2 p. m.—Auto Drive, beginning at Reveira Hotel.

8 p. m.—Dinner-Dance—Buena Vista Hotel.  
Thursday, May 14, 1925.

8:30 a. m.—Sightseeing.

10:30 a. m.—Session.

Invocation.

Reading of Minutes.

Reports.

Election of Officers.

Unfinished business.

Address—How May Woman's Auxiliaries Assist the Sanatorium—Henry Boswell, Sanatorium.

12 m.

12:30 p. m.—Luncheon.

2:00—Boat Ride.

## BILOXI, THE CONVENTION CITY

*By Anthony V. Ragusin*

The approaching convention of the Mississippi State Medical Association at Biloxi on May 12, 13 and 14 is expected to draw the largest attendance in the history of the organization. Biloxi is noted as the convention city of Mississippi and entertains more conventions than any other community in the state. It is well known to doctors from all parts of the country, and has many attractions to offer the convention.

Biloxi is fast developing into one of the leading health and pleasure resorts of the United States and is a city of out-door sports, historic interest, romance and beauty. It is situated on a peninsula, facing the Mexican Gulf and extending to the Back Bay and the beautiful Tchouticabouffa River.

The city has recently spent near \$1,000,000 in municipal improvements, including street paving, parks and playgrounds.

Biloxi is but 24 hours from the center of population of the United States. There is a fast train service to all points in the South. Two national highways run through Biloxi, the Mississippi Gulf Coast to Chicago Highway and the Old Spanish Trail.

Considerable historical interest is allotted to the city. On a February day in the year of 1699 the gallant French naval officer, d'Iberville, sailed into the Back Bay of Biloxi and planted the first capitol of the great Louisiana territory. That huge territory, extending from the Gulf of Mexico to Canada, and from the Rocky Mountains to the Mississippi River, including that little strip known as the Mississippi Coast, which later became known as the Louisiana Purchase, was first governed at Biloxi.

Even though way down on the Gulf of Mexico the French explorers came in contact with the Biloxi tribe of Indians, which was a branch of the famed Sioux Family. Biloxi, an Indian word, signifies "The First People," according to the Smithsonian Institute of Washington, D. C.

To the southward lies a chain of beautiful islands. On Ship Island, thirteen miles off Biloxi, is the famed Fort Massachusetts, which was built by the Federal forces during the Civil War. On Biloxi's West Beach Boulevard is the old Jefferson Davis home, where the president of the Confederacy spent his last days. This beautiful home is now the Mississippi Confederate Soldiers Home and over 200 veterans of the Gray are spending their last peaceful days there. On the north shore

of the Back Bay stands a granite boulder dedicated to the spot where d'Iberville landed in 1699.

The lighthouse on the West Beach Boulevard, built over seventy-seven years ago, is a bit out of the "old days." Massive oaks, paved boulevards and pretty homes flank it on one side, while on the other sparkles the waters of the Mississippi Sound. Flowers, especially roses, have no definite season in Biloxi but bloom throughout the year. The spring months find the flowers particularly beautiful. Then the Back Bay with its pretty driveway trails, is an invitation to the motorist.

The islands of the Mississippi Sound in the vicinity of Biloxi are noted for their entrancing scenery. The unusual names were given to the islands by the early French explorers under d'Iberville. They lend a touch of old-world charm to the softly blended beauty of Biloxi and her environs.

The scenery of Biloxi is unique. It is so different from that of the north that visitors quickly fall under the spell of its soft Southern charm. Benachi avenue with its famed spreading oaks is probably the only thoroughfare of its kind in America. These oaks planted over a hundred years ago, offer an unusual sight to the visitors and tourist. East Beach and West Beach Boulevards with their palms, magnolias and profuse

shrubbery are among the scenic driveways of the South.

Among Biloxi's beautiful parks is the Naval Reserve, which covers 377 acres in the northwest corner of the city, bordering the Back Bay. There is a fascinating history of the gigantic moss-covered oak trees of the Naval Reserve Park. Years ago, before the steel superdreadnought of Uncle Sam's Navy came into use, the government had extensive property in various parts of the country, whereby the best grades of timber could be obtained for shipbuilding should a sudden war break out. The wood ship has to have a very strong bow-stem and keel. There is not finer or stronger wood for this purpose than the trunks of huge oak trees. With preparedness in view, the government held on to this beautiful 377-acre tract. Finally the government turned over the property to the City of Biloxi for park purposes. A portion of the park is set aside for automobile tourists and campers. Pure artesian water flows freely. A pier 1,000 feet in length extends into the Bay from the park.

All sports and other forms of athletics are enjoyed in Biloxi. Besides yachting, water sports and golf, there are baseball, football, hunting, trap shooting, tennis and other outdoor diversions.

The semi-tropical climate is the most inviting for the golfer, angler, vacationist, and tourist, or for all-the-year round residence.

## MEDICAL ECONOMICS

*Chas. A. Bahn, M.D., Department Editor.*

### PRACTICAL MEDICAL ECONOMICS

#### PART 9.

“How successfully to make an honest living in medical practice,” is a rather important subject not taught in medical colleges.

We assume that all doctors who have a reasonable knowledge of the construction and ailments of the human body will soon find ready purchasers for their knowledge; will quickly adapt themselves to the particular field for which they are best suited; and that the just recognition which their efforts deserve from their clientele and colleagues will provide for them and theirs in more or less affluence.

In by-gone days this was probably true, but today I believe that both the regular medical profession and the public would benefit by wholesome instruction concerning what each should expect of the other. The medical profession, apparently, does not thoroughly understand that the public wants to buy from us health and happiness, insofar as the construction and function of the body is concerned, at a minimum expense of time and money.

The public does not seem to understand thoroughly that we have for sale essentially, knowledge and service, as it applies to the construction and function of the human body in health and sickness, and that we can at best make nature's repair plant function as effectively as possible; that we are neither magicians nor conjurers, that we receive no mysterious hunches, but have to work hard for our knowledge; that we have to examine people carefully to understand why their mental and physical machinery is not hitting on all six; that we can no more give magical medicines, which insure health and happiness, than we can, Pullman passes which are good in the next world; and that our big words often do not express big ideas.

Don't you think that the average layman should know that a medical education generally costs not less than six years of hard work and about ten thousand dollars in money; that medical practice is largely a one man work, and that when the doctor stops work the income stops; that the average financially active professional life of a doctor is about twenty years; that for the amount of time, money and effort invested, the practice of medicine is probably the

most poorly paid of all professions excepting the ministry; that of the 700 doctors in New Orleans, there are probably not fifteen who are earning fifteen thousand dollars net yearly from the practice of medicine? If these and a few other facts were more generally known and understood many of our practical problems would solve themselves.

This lack of understanding on both sides results in our feeling that we are often taken advantage of, and do not receive a fair share of our production; while the public look upon us as a rather well meaning but impractical lot, who try to charge as much as the traffic will bear in one form or another, for what we do; and who usually go through a lot of useless red tape in passing the patient from doctor to doctor, or rush them to hospitals for operation.

A man who inherits a reasonable amount of practical business sense does not study medicine, because it does not appeal to him. The appeal is essentially to the mental type who live in a world of ideals rather than practical realities; of refined mental conceptions rather than material actualities, sometimes coarse and crude.

Six or more years in medical college where theory and the doings of the sick and the abnormal are almost exclusively taught still further reduce our prospective doctors' understanding of human beings, how they really feel, act and conduct their business transactions.

The young doctor having been thoroughly grounded in life as it is not, and taught to think in terms of a language that adapts itself easily to ambiguity, can it be wondered that he does not understand what a practical world wants to buy from him and really what he has to sell. Let us not fool ourselves, as doctors we sell knowledge and service.

Like the explorer in the jungle without a chart or compass, so is the average doctor in the jungle of finance from which he must derive his livelihood. After years of hard work with long hours he often manages to earn a fairly comfortable living, usually spending more than he is making. As he does not understand the fundamental principles of business he is the easy mark for the fake promotor of one sort or another. He buys what he does not know and usually pays for his ignorance. The re-

sult is that during his productive period he saves little or nothing because he does not understand the practical management of his production, and what he saves is often thrown away.

And then there is our code of medical ethics which is intended to stand for a square deal to the patient, the doctor, and other doctors. Among other things, we believe that it is not best for the public nor the profession that a doctor exploit himself in the lay press because such contributions do not generally express the whole truth, and give the average reader a false conception of the facts and their proper valuation. On the other hand have we not gone to the other extreme. Should we not take the attitude that truthful medical publicity, reasonably supervised, is educational? It is difficult for the lay press which rightly considers itself a public institution of learning, to get from us reliable medical information because we are taught to avoid the newspaper reporter more than the plague. The back numbers of the daily press will show however, that the names of some physicians have appeared rather more frequently than their scientific attainments seem to warrant. The young doctor hardly understands why some of his colleagues are entitled to more privileges than others. Why can we not establish a rule that every bit of medical information given to the lay press must first be approved by a fair minded committee which will promptly approve or disapprove, if possible, with constructive suggestions; all material submitted.

Let us be frank—we are all hungering for deserved publicity, because in a way it stands for success, and no one likes to be a failure. The important thing is that we learn to use medical publicity in a straightforward, truthful, way; and supervise it to the benefit of both the profession and the public.

In our medical meetings, rare cases are presented, but no attention is given to the study of the practical increase of our usefulness to those who employ us and to the possible reduction of our charges to a reasonable minimum, based on accurate facts and figures.

Our respect for the traditions of the past, with their ceremonies, shams and mysticisms, has apparently blinded us to the demands of the present, which are simplicity, practicality, frankness and square dealing.

Many cultists have gone to the other extreme. They are profiting by our mistakes

and taking advantage of our unwillingness to understand the public mind. They may not know the fine points of histo-pathology, but human nature, they do know; and also how to derive the greatest possible revenue from their efforts.

There is a broad path between these two extremes in which we should progress. Our greater knowledge of the human body and its ailments enables us to render the greatest possible service if we will add to our technical knowledge a broader understanding of human beings and a desire to increase our practical and economic usefulness.

Personally, I believe that the "Holier Than Thou" attitude and "Too Proud To Fight" air belong to yesterday. We, of the regular medical profession are not 100% correct in our understanding of the human body in health and disease and, incidentally, all cultists are not 100% incorrect in their conceptions. The less we know about any given subject, the more dogmatically do we express ourselves. There is much of practical value that we may be able to learn from cultists by unprejudiced study and analysis of their ideas. On the other hand, if we as a profession really believe that our education and training enable us to conserve public health better than cultists of one sort or another, let us not be afraid nor ashamed to teach the public the truth about ourselves, not from the standpoint of trying to get a little cheap individual notoriety, but from the standpoint of creating an increased legitimate demand for medical services which we expect to meet. It has been said, however, that five doctors can not sit in the front pew of Heaven in peace and amity. This is partially true because the average doctor feels he must represent himself second to none in order to avoid an inferiority inference.

I have been told that our legal conferrers have a committee before which any layman can present without cost any apparent instance in which a lawyer has been at fault either regarding the character of his services or the charge made therefor. In other words they apparently have an open court in which the public can get a square deal so far as their membership is concerned. A committee of that sort in the medical profession would serve several excellent purposes. In the first place it would teach the public that we are not closed corporation in which it is impossible to get a square deal where our membership is concerned, and in the second place it would cause those



who are so inclined, to think twice before doing anything which cannot well be exposed to the sunlight of public and professional scrutiny. Those who have nothing to hide, usually do not resent investigation especially where the good of all is concerned.

After all, it is not hard to see why, from the standpoint of the average practical thinking layman, we are considered impractical idealists, who make fish of some, fowl of others; who do not have to work very hard for the large incomes we are supposed to receive; who are a fair target for every fake promotion scheme; who are fadists in one form or another; who have a foolish

set of rules called medical ethics; and who are to be dealt with more or less on the caveat emptor principle—"Let the buyer beware."

The fault is really not with the public but with us. Our professional training and caste have not kept pace with current thought. The fact that less than 20% of the thousand persons selected at random and questioned some two years ago in Chicago professed loyalty to the medical profession, that it did not employ cultists, shows how we understand what the public expects of us.

Address all communications to Dr. Chas. A. Bahn, 1551 Canal St., New Orleans, La.

## New Orleans Convalescent Home

The New Orleans Convalescent Home has cared for 13,708 patients through the year 1924. The following figures show the growth and use of the work:

### NUMBER OF PATIENTS ADMITTED BY YEARS

1920	1921	1922	1923	1924
126	165	186	177	228

Daily average cared for:

Approximately 20

### PURPOSE AND SERVICE

Provides a temporary, non-sectarian home for men, women and children discharged from hospitals and other sources as cured but in need of after care.

**ADMISSIONS:** Are through hospitals, social service agencies and private sources with medical diagnosis affording immediate entrance.

**STAY IN HOME** is indeterminate, governed by individual conditions through after care and examinations at clinics.

**ACTIVITIES AND METHODS.** Light occupation in the institution under careful supervision is used to test endurance and to aid self-confidence. Outside employment is secured through incoming applications, through initiative of patients seeking it, and the endorsement of the Home based upon proof of ability while residents.

**RECREATIONS** are given as curative agencies and educational promoters, and "rest hours" are part of the daily routine.

**REDUCED TRANSPORTATION** is secured, and material assistance in meeting it from co-operating with Relief Societies assists patients to return to their homes.

## NEWS AND COMMENT

*Lucien A. Ledoux, M. D., Department Editor*

"Every man owes some of his time to the up-building of the profession to which he belongs."  
—Theodore Roosevelt.

### THIRD DISTRICT MEDICAL SOCIETY

The quarterly meeting of the Third District Medical Society held in Lafayette, Tuesday afternoon and night was largely attended by members of the society from various parts of the Third District, together with some visitors from other Districts. An interesting program was arranged in connection with the meeting.

About 40 physicians from the Third District were present, and visiting physicians attended from New Orleans, Alexandria, Opelousas, Crowley and Rayne.

The program opened with the showing of a motion picture on medical subjects, produced by Dr. Louis Gregory Cole, and which was presented at the Royal Theatre at a special showing arranged for the physicians attending the meeting.

At 7:00 o'clock Tuesday night, a program opened at the Elks' Home with Drs. Leon J. Menville, D. N. Silverman and Maurice J. Gelpi as speakers.

After the meeting at the Elks Home, a banquet for members of the society and visitors was given at John's Tavern where an enjoyable five course menu was served.

The next meeting of the Society is scheduled for sometime in July, at Patterson, in connection with the annual boatripe outing taken by the society.

Officers of the society include Dr. C. M. Horton, of Franklin, President; Dr. P. A. Boykin, Secretary, of Jeannerette; and Dr. Harold G. F. Edwards, Secretary and Treasurer.

### EIGHTH CONGRESSIONAL DISTRICT LASALLE PARISH MEDICAL SOCIETY

The Physicians Improvement and Protective Association of LaSalle Parish turned its organization into the LaSalle Parish Medical Society and at its regular meeting the first week of March elected officers and forwarded all proceedings to the State Society. Dr. O. F. Matthews Urania, was made President, Dr. J. P. Durham, Trout, Vice President, Dr. W. V. Taylor, Olla, Secretary-Treasurer, and Delegate to the State Convention. Dr. J. A. Coleman, Jena was made alternate.

This adds a new parish to the many organized in the district. The society is functioning splendidly. Its meetings are quarterly with headquarters at Alexandria. Splendid programs are rendered.

Dr. Marvin Cappel as President of the Rapides Parish Medical Society holds the Rapides medicos in line having interesting monthly programs.

Avoylles with Drs. Chatelain, Quirk and Fox at the wheel are meeting regularly every other month. The next meeting is to be at Simmesport on April 15th. A medical meeting there will be quite a novelty to its citizens and to the medical fraternity of Avoyelles. Many medical men throughout the State will attend. The other or-

ganized parishes are developing marked interest and the most flattering status will be presented at the proper time covering every angle of the District.

The Eighth Congressional District was indeed honored during the month by the visit of the Sanitary Commission from Latin America under the leadership of Docteur Louis Destouches of the health department of the League of Nations. Their stop was at Alexandria and from all accounts their stay was more than pleasant and the health conditions and sanitation of the district very good.

### MONTHLY BULLETIN OF THE SHREVEPORT MEDICAL SOCIETY

April meeting of the Shreveport Medical Society, April 7, at Charity Hospital at 8 p. m.  
"Let us know each other better."

#### April Scientific Program

Reports from the American Congress of Internal Medicine held at Washington, March 9-15. Dr. F. G. Ellis, Dr. T. P. Lloyd, Dr. A. R. Herold, Dr. W. S. Kerlin

Charity Hospital, March 3, 1925. The Shreveport Medical Society was called to order for the regular monthly meeting at eight p. m., by President Sanderson. There were eighty-five members and four visitors present. Minutes of the last regular meeting were read and approved.

Secretary's report. An application for membership in the Society was received from Dr. Dorf Bean and referred to a committee composed of Drs. Pirkle, Crain and T. E. Williams.

A letter was read from the State Society calling attention to a proposed amendment to the constitution at the next convention.

A letter was read from Dr. J. Q. Adams, brother of the late Dr. W. M. Adams, thanking Dr. Sanderson and the members of the Society for their expressions of sympathy. A similar note was read from the widow and children of the late Dr. W. M. Adams.

Following the reading of a letter from Dr. A. L. Peters, Secretary of Ouachita Parish Medical Society, a motion was made, seconded and passed that we accept their offer of an exchange of programs and that the program and date be left to the program committee.

On being favorably reported upon by committees the following were elected to membership: Drs. Shirley H. Betts, D. R. McIntyre, G. W. Murphy.

Dr. E. C. Simonton read an interesting paper on Adenoids and Tonsils in Relation to General Health. Discussion by Drs. Boaz, L. W. Gorton and Picard. A motion was made, seconded and passed that presentation of clinical cases be postponed.

Dr. Douglas read two papers prepared by an unofficial group of members concerning the narcotic situation and answering the allegations made regarding the local situation, with the request

that the Society choose one as an official statement of the society. A motion was passed that the matter be opened for discussion. Discussion by Drs. J. D. Young, Herold. Dr. Herold made a motion which was seconded and lost that both letters be tabled.

Dr. Boaz made a motion that the substance of these two letters be combined into one, referred to a committee and that the committee report back to the society at a call meeting. Motion seconded. Discussion by Drs. Milton Smith, Hendricks, Penick, Scales, Barrow. Dr. Barrow made a substitute motion which after considerable discussion he withdrew.

Dr. Rougon made an amendment to Dr. Boaz's motion that the committee report back at a call meeting and that Dr. Dowling be invited to be present with his information and that the call meeting be especially for discussion of the narcotic situation. Motion was seconded. Discussion by Drs. Scales, and J. M. Gorton.

On the vote the amendment and original motion passed.

On the committee were appointed Drs. Douglas, Ragan and Herold. Drs. Ragan and Douglas requested that their names be withdrawn from the committee. Additional members appointed were J. E. Knighton and Milton Smith. On objection from the floor the committee remained as appointed.

A motion was made, seconded and passed that the special meeting be held March 18th at 8 p. m., at Charity Hospital.

Dr. Sanderson announced that the Society has a special invitation to be the guests of the Four Square Bible Class on Sunday, March 15th. A motion was made, seconded and passed that as many go as possible.

Dr. Cassity made a motion that it be considered unethical for any physician of Shreveport to prescribe narcotics for an incurable addict except after consultation with another reputable physician. Motion seconded. Dr. Adair made a substitute motion that the President appoint a committee to investigate illegal prescribing of narcotics and to report back to the Society.

Dr. Milton Smith made a motion that both previous motions be tabled. Motion seconded and passed.

On motion the Society adjourned.

R. T. Lucas, Secretary.

#### POINTE COUPEE PARISH MEDICAL SOCIETY

At the regular meeting of the Pointe Coupee Medical Society held Tuesday evening, February 3, in accord with the program, Dr. Carruth made a talk on "The Diagnosis and Treatment of Venereal Diseases in their Relation to the State Marriage Law." He called attention to the rapidly growing interest in such questions, to the now World-wide recognition of the need of such legislation, and cited the fact that even a pagan land like Turkey had at last awakened to the menace and recently placed upon her statute books a marriage law.

The talk was well received and a very interesting discussion followed in which the parish health officer, Dr. Cazayoux, Drs. F. F. Rougon of Oscar, and Devron of Lakeland, were among those making specially pertinent and forceful remarks. Dr. Devron's remarks were especially interesting, as he confined himself to the discus-

sion of the most up-to-date methods of testing for these diseases by which the possibility of error is largely eliminated.

It was near midnight when the meeting adjourned for the special feature of the program—an oyster supper tendered the members of the society by the President Dr. Cazayoux.

#### BOSSIER PARISH MEDICAL SOCIETY

At a recent re-organization meeting of the Bossier Parish Medical Society, Dr. Hall of Rocky Mount was elected President; Dr. Carter of Bossier City, vice president; Dr. C. M. Tucker, Haughton, secretary-treasurer. Dr. Hall was chosen delegate and Dr. Carter alternate, to the State Medical Society Convention. District Councillor Herold was present and read a paper. Resolutions of regret and of good wishes to former President D. J. McAnn, who is ill, were unanimously adopted.

#### RED RIVER PARISH MEDICAL SOCIETY

Red River Parish Medical Society met in Couchatta on March 4th, with President Edgerton in the chair. Routine business was transacted. District Councillor Herold was present and read a paper. Officers and delegates previously elected.

#### WASHINGTON PARISH MEDICAL SOCIETY

The Washington Parish Medical Society held its regular monthly meeting, March 26th, 1925. The membership assembled in the dining room of the Pine Tree Inn, Bogalusa, La., at 8:00 p. m., where a luncheon was served. After luncheon the house was called to order by the President and the regular business of the society taken up. The scientific program consisted of papers and clinical reports. For this meeting Dr. H. W. E. Walther of New Orleans, was the invited guest, and read a paper entitled, "Some Phases of Modern Urological Practice"; this address was illustrated with steroptic views. Dr. R. R. Ward opened the discussion for the society.

F. Michael Smith, Secretary-Treasurer.

#### DECEASED

Dr. B. B. Warren died suddenly at his home in Covington, La., Tuesday, March 31, 1925, at the age of 65 years. Dr. Warren was a graduate of Tulane, Class of 1882, and a member of the St. Tammany Parish Medical Society.

Louisiana was represented at the recent Annual Clinical Session of the American Congress on Internal Medicine by Drs. T. P. Lloyd, F. G. Ellis, W. S. Kerlin and A. A. Herold, all of Shreveport. The meeting was at Washington, March 9-14th. The 1926 session will be held in Detroit and Ann Arbor, Mich.

#### DR. PARHAM HONORED

On March 20, 1925, the staff of the Charity Hospital presented to the Board of Administrators, a life size portrait of Dr. F. W. Parham in recognition of his work in that institution. Through his efforts puerperal infection was

stamped out in 1887 and in 1890 aseptic surgery was for the first time put on a firm basis. For more than forty years Dr. Parham has devoted his time and energies to the welfare of the Hospital and no one individual has done more for the advancement of surgery within its walls.

#### NEW ORLEANS OPHTHALMOLOGICAL AND OTO-LARYNGOLOGICAL SOCIETY

The New Orleans Ophthalmological and Oto-Laryngological Society met at the Domicile of the Orleans Parish Medical Society on March 19th, 1925. 45 members attended.

At this meeting the Eye, Ear, Nose and Throat Hospital was decided upon as the domicile of the Society for the coming year. Meetings are held every third Thursday of the month, starting at eight o'clock and adjourning at ten.

Those interested in these specialties in New Orleans and adjoining territory are eligible for membership.

Dr. T. J. Dimitry was elected President and Dr. Val H. Fuchs, Secretary-Treasurer for the coming year.

Georgia is carrying on a campaign to register and teach her midwives in order to make conditions safer for mothers and babies in that state. Dr. Joe P. Bowdoin, Director of the State Division of Child Hygiene, reports that one-third of the babies born in Georgia nearly 23,000 are not attended by a physician. Over 4,000 midwives have already been registered.

There will be a meeting of the American Proctologic Society in the Ambassador Hotel, Atlantic City, N. J., May 25-26, 1925.

#### AMERICAN BOARD OF OTOLARYNGOLOGY

The next examination conducted by the American Board of Otolaryngology will be held at the Ambassador Hotel, Atlantic City, on Tuesday, May 26th, at 9 a. m.

Application blanks may be obtained from Dr. H. W. Loeb, Secretary, 1402 S. Grand Boulevard, St. Louis, Mo.

#### AMERICAN SOCIETY FOR THE CONTROL OF CANCER

Dr. Howard Canning Taylor, of No. 20 West 53rd St., Professor of Clinical Gynecology at the College of Physicians and Surgeons and President of the American Gynecological Society, was elected President of the American Society for the Control of Cancer at the annual meeting of the Society held in its rooms, No. 370 Seventh Avenue, March 7, 1925. Dr. Taylor, who has been the Society's Vice President and Chairman of its Executive Committee, succeeds Dr. Charles A. Powers, deceased. Thomas M. Debevoise was re-elected Secretary and Calvert Brewer was again elected Treasurer. Dr. Francis Carter Wood was elected Vice President.

In the annual report of Dr. George A. Soper, Managing Director, evidence was presented to show that the efforts of the Society to acquaint the public with the early symptoms of cancer in

order that those who were affected may receive speedy treatment had borne fruit throughout the country.

#### MEDICAL FACULTY OF STRASSBURG

Secretary General Dr. E. Vaucher of the Medical Faculty of Strassburg, makes the following announcement:

Post Graduate Courses will be given under the auspices of the Medical Faculty of Strassburg, and the entire Tuberculosis Association of Alsace-Lorraine at Strassburg beginning October 9th and ending October 23rd, 1925. A program of courses offered is enclosed in the communication and further information may be secured in the Journal office.

#### WESTERN PHYSIOTHERAPY ASSOCIATION

The seventh annual meeting of this Association will be held at the Little Theatre, Kansas City, Mo., Thursday and Friday, April 16 and 17, under the presidency of Dr. L. A. Marty of Kansas City.

The exhibit space in the Little Theatre has been considerably augmented this year and those who attend this meeting will be well repaid for a visit to the exhibit hall. All the up-to-date equipment will be shown by 20 manufacturers.

All physicians and surgeons who are interested in the progress of Physiotherapy are cordially invited to attend this meeting. Full information and programs may be obtained by addressing the Secretary, Charles Wood Fassett, M. D., 115 East 31st St., Kansas City, Mo.

A course of Post-Graduate Instruction in Urology is to be given at All Saints' Hospital, Vauxhall Bridge Road, S. W., during the month of August, 1925. In addition to the above there will be Clinical Demonstrations throughout the month. The fee for the course is five guineas. Cheques should be made payable to the Fellowship of Medicine, and the names of those wishing to attend should be sent to the Secretary to the Fellowship at No. 1, Wimpole St., London, W. 1, July 29.

A Post-Graduate Course in Chest Diseases is to be given at the City of London Hospital for Diseases of the Heart and Lungs, Victoria Park, E. 2, June 8 to June 20, 1925.

Operations if any will be performed by Mr. W. H. C. Romanis on June 16 at 10 a. m. Further notice will be given during the course.

The fee for the course is two guineas, and the names of those wishing to attend should be sent to the Secretary of the Fellowship of Medicine, at No. 1, Wimpole St., W. 1, by June 1.

#### OPPORTUNITIES FOR GRADUATE MEDICAL STUDY IN NEW YORK

The Committee on Medical Education of the New York Academy of Medicine has prepared a series of synopses of approved opportunities for graduate medical study in New York City which will soon be published for distribution. The synopses cover dermatology and syphilology, obstetrics and gynecology, internal medicine, neurology and psychiatry, ophthalmology, oto-laryngology,

pediatrics, surgery, urology and orthopedic surgery.

A Bureau of Clinical Information is maintained at the Academy of Medicine, 17 West 43rd St., where information is available regarding opportunities for graduate medical study in New York, and also in other cities of the United States and abroad. The Executive Secretary in charge of the bureau is prepared to answer inquiries concerning ordinary internships, special internships or residencies, graduate courses in medical schools and teaching hospitals, and extension courses. Much information in regard to graduate medical work in England and on the Continent is on file.

The Bureau publishes a Daily Bulletin of Surgical Clinics which will go mailed free to visiting doctors on request. A Weekly Bulletin of Medical Clinics also is published. A book of the fixed clinics of Greater New York, with a transportation guide, has been prepared for the use of visitors whose stay in the City is limited, and is furnished without charge.

The lack of continuous contact between scientists, scientific institutions and cultural organizations of the United States and the Union of Soviet Republics has been felt for many years in both countries.

Since the war there has been practically no mutual exchange of scientific publications—with the result the institutions and organizations concerned were unable to form any comprehensive idea of the mutual activities and achievements.

A similar situation prevailed not so very long ago in the cultural relations between the Soviet Union and most European countries.

Due to this unsatisfactory condition a special organization was brought to life—the Joint Information Bureau which has been created in Moscow with the aim of assisting in the establishment of closer connections between the Union of Soviet Republics and other countries.

#### BOOK REVIEWS

Clinical Aspects of the Electro-Cardiogram.

Harold E. B. Pardu, M. D., Associate in Medicine, Cornell University, 222 pages, N. Y., Paul B. Hoeber, 1924.

The author has presented a readable text in a highly technical field. The exposition is clear, accurate, and authoritative, as might be expected from an experienced worker and investigator. He has tried to collect all the current knowledge of the electrocardiogram which is of clinical importance. All details of experimental and theoretical considerations, as well as all controversial points have been touched upon as simply as possible. Every student (i. e., every practitioner) of internal medicine must seek some orientation in the newer ideas of cardiac disease even if he has not the opportunity of employing electrocardiography nor the need of interpreting electrocardiograms. To the one seeking such orientation, as well as to the clinical electrocardiographer the present volume may be commended.

I. I. Lemann.

Goitre: Nonsurgical Types and Treatment.

Israel Bram, Instructor in Clinical Medicine, Jefferson Med. College, 479 pages, N. Y. The Macmillan Co., 1924.

This book is written in vigorous, almost polemical style. Its thesis is that all goitres of the following types should be considered nonsurgical and treated medically only: 1, Parenchymatous hypertrophy; 2, Colloid goitre; 3, Puberty hyperplasia; 4, Hyperplasia of exophthalmic goitre (Grave's disease). The author would restrict the employment of surgical measures to "adenomatous, cystic and all other thyroid enlargements not classified under nonsurgical goitre." The chief field of controversy, is of course, that of Grave's disease. The author's attitude and spirit is exemplified by the following quotations: "Surgical treatment of nonsurgical goitre is a fallacious procedure, yielding, at best, a low operative mortality rate and a neat scar. The percentage of clinical recovery is relatively negligible." The rationale of thyroidectomy should not be based upon the fact that only two or three in a hundred die of the operation. It is not justified, even if many patients surviving operation are improved, if this amelioration of symptoms is incomplete and temporary.

Moreover, the mortality rate, where a broad-cast average is taken, is still genuinely high. Again he demands to know, by what standard are we to judge slight improvements, marked improvements and clinical recovery? "Surgical attacks of the hyperplastic thyroid is physiologically, pathologically and clinically inconsistent." "The piece of hyperplastic thyroid tissue left in situ still hyperfunctionates—still heeds the call of the uninfluenced, activating etiological factors which require the assistance of an entire thyroid gland for compensation, and soon again the organ endeavors to become entire again through regenerating proliferation."

The larger part of the volume is devoted to a careful and accurate discussion of the phenomena of Grave's disease and a detailed painstaking plan for its medical treatment. Additional interest in this aspect of the problem is derived from the revival during the past eighteen months, under the leadership of Plummer, of iodine therapy (at least as an adjunct). Bram has little to say of this and his attitude is very conservative, though favorable. He strongly advocates quinine hydrobromate. Exophthalmic goitre patients, he finds are insusceptible to cinchonism and he has proposed a differential diagnostic test upon this basis.

This book may be commended as a trustworthy guide to the medical treatment of goitre, if that is decided upon. To everyone with an open mind its perusal will prove stimulating.

I. I. Lemann.

Diseases of The Eye, A Manual, for students and general practitioners. By Chas H. May, M. D., 11th Ed. N. Y. Wm. Wood and Co., 124.

This eleventh edition of a popular manual on the eye is received with the usual good wishes, for it continues as its name implies "a manual" for students and general practitioners.

The subject matter is concise, not mutilated as is so common in manuals, but is sufficiently explicit to convey the necessary information that would be desired by student or general practitioner.

The section on refraction can not be improved upon, and the colored plates of diseases makes:

for ease in grasping what would otherwise be very difficult.

Can you wonder with the above qualifications why one hundred and fifty thousand copies have been published? The volume has been kept up to date, yet it has not been increased in size.

T. J. Dimitry.

Relative Position of Rest of the Eyes. Prolonged Occlusion Test. By F. W. Marlow, M. D., M. R. C. S., F. A. C. S. Philadelphia, F. A. Davis Co., 1924.

An excellently presented monograph, treating on an interesting fundamental problem, explaining a way many difficulties which are met with in a study of muscle imbalance

The book reveals a truth, making possible a better knowledge for diagnosis and treatment, for he has defined the "relative position of rest," for the extrinsic ocular muscles.

The case reports are well worked out and the tables carry conviction.

T. J. Dimitry.

Annual reprint of the Reports of the Council on Pharmacy and Chemistry of the American Medical Association for 1924. Cloth. Price, postpaid, \$1.00. pp., 82. Chicago: American Medical Association, 1925.

This volume contains the reports of the Council on Pharmacy and Chemistry that have been adopted and authorized for publication during 1924. Some of these reports have appeared in The Journal of the American Medical Association. Others are now published for the first time.

The annual volumes of the "Council Reports" may be looked on as the companion volumes to New and Nonofficial Remedies. While the latter contains the medicinal preparations that are found acceptable, the reports contain the reason why certain products were not accepted. Thus the present volume contains reports on the following products which the Council denied admission to New and Nonofficial Remedies: Aolan; Aspatol; Atussin, Peptoprteasi, Paraganlina, Vassale, Fosfoplasmina, Aznoganglina, and Endo-Ovarina Tablets; Borosodine; Carsinal; Colodiñe and Colobromidine; Ferrasin; Glyeuthymenol; Hoyt's Gluten Flakes; Iodeol; Loefflund's Food Maltose; Mistura Creosote Comp. (Killgore's) and Tablets Cascara Comp. (Killgore's); Neo-Riodine; Nicomors; Peptone Solution for Hypodermatic Use (Armour); Pixalbol; "P-0-4"; Pollantin; Promonta; Pruritus Vaccine Treatment-Lederle (Montague Method); Restor-Vin; Some "Mixed" Vaccines of G. H. Sherman and Tersul Hiller.

The volume also contains reports of products which were included in former editions of New and Nonofficial Remedies but which will not appear in 1925 edition because they were found ineligible for further recognition. Among these are polyvalent antipneumococccic serum, colon bacillus vaccine, gonococcus serum and gonococcus vaccine.

The volume contains a number of reports of a general nature, for instance: a report on the therapeutic value of benzyl benzoate; a report on anaphylaxis produced by thromboplastic substances and a report on the therapeutic use of digitalis.

Physicians who keep fully informed in regard

to the value of proprietary remedies will wish to own this book.

Medical Gynecology—Samuel Wyllis Bandler—W. B. Saunders Co., 1924.

Bandler's Medical Gynecology is designed especially for the general practitioner but is none the less a book which offers valuable suggestions to the specialist in this particular field. There is a sharp distinction between operative and non-operative conditions and the author points out very definitely the limits of non-operative procedures. The fourth edition has been revised and brought up to date, especially in such matters as X-ray diagnosis, radium therapy and endocrinology. The chapter on endocrines particularly covers many pages and discusses very thoroughly the indications, dosage and possible beneficial results of treatment by endocrine therapy but the author's enthusiasm in this matter, except in a very few instances, appears considerably more zealous than experimental and chemical facts have borne out.

The treatise on pain is excellent, dealing as it does with the discomfort incidental to lesions involving separate pelvic organs as well as the diagnosis and treatment. The question of sterility is also well handled. The classification of the various types is good and the methods for detecting the underlying causes of the condition are simple, up to date and refined.

The chapter on constipation furnishes the clearest, most rational ideas I have yet seen in print on this subject and every physician could profitably read this chapter more than once to refresh himself as to the causes, treatment and pernicious effects of this very common malady.

The chapters on other subjects are equally clearly outlined and well presented in every respect, except that the gross and microscopic pathology is given too little attention. The outline for the systematic examination of gynecological patients as set forth in the first chapter could be followed in detail in office practice with very valuable results. The illustrations, while schematic, are good and serve the author's purpose excellently.

Hilliard E. Miller.

#### PUBLICATIONS RECEIVED

W. B. Saunders Co., Philadelphia and London: "Pediatrics," Ed. by Isaac A. Abt., Vol. 6.

Paul B. Hoeber, Inc., New York: "Teeth and Jaws," by Hermann A. Osgood.

J. B. Lippincott Co., Philadelphia and London: "International Clinics," Thirty-Fifth Series, Vol. 1, 1925.

C. V. Mosby Co., St. Louis: "The Dentist's Own Book," by C. Edmund Kells, D. D. S.

Year Book Publishers, Chicago: "Practical medicine series," Vol. 5, Gynecology and Obstetrics, Ed. by Thomas J. Watkins and Joseph B. De Lee.

P. Blakiston's Son & Co., Philadelphia: "Pathology and Bacteriology of the Eye," by E. Treacher Collins and M. Stephen Mayou. 2d Ed.; "Textbook of Human Physiology," by Albert P. Bru-baker, 8th Ed.

#### REPRINTS

"A Diet for Peptic Ulcer," by A. Altshuler, Detroit.

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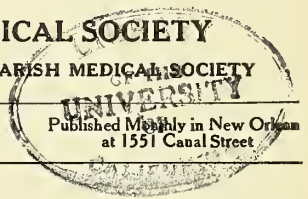
JUN 16 1925

# NEW ORLEANS MEDICAL AND SURGICAL JOURNAL

Owned and Published by THE LOUISIANA STATE MEDICAL SOCIETY  
OFFICIAL ORGAN MISSISSIPPI STATE MEDICAL ASSOCIATION AND ORLEANS PARISH MEDICAL SOCIETY

\$2.00 per Annum, 25 c per Copy  
Volume 77, Number 12

JUNE, 1925



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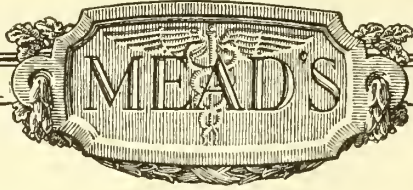
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and

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Vol. 77

JUNE, 1925

No. 12

## POSTPARTAL CARE\*

HILLIARD E. MILLER, M. D.

NEW ORLEANS.

Within recent years prenatal care has become so much the rule that eclampsia and other preventable complications of pregnancy have shown a markedly decreased incidence. Actual parturition has been made less trying by an earlier use of forceps and version and a wider use of anesthesia, so that grave birth injuries following prolonged labor and nervous exhaustion following hours and days of unrelieved pain no longer force women into years of invalidism as was only too frequently the case a generation or two ago. Postpartal care, on the other hand, has made no such advances. The normal patient, particularly if she is delivered outside a hospital, is given no care at all except by her nurse; the abnormal patient is treated by empirical methods according as her symptoms demand attention rather than being given a routine care which will prevent most of these symptoms from arising and which will restore her to her family and to society as sound and well as when she entered upon the ordeal of pregnancy. For the last several years I have treated all my puerperal cases according to a uniform routine and because my results have been very gratifying I am tempted to bring the subject before you.

It is not my intention to discuss the third stage of labor except to point out that true postpartal care begins then for the reason that the amount of blood lost by a patient who is already exhausted from a long and tiring labor will naturally have much to do with her convalescence. For many years it has been my custom to order 1 cc. of pituitrin intramuscularly immediately after the delivery of the baby, and

although I cannot give you definite figures I feel no hesitancy in saying that this simple measure reduces the so-called normal blood loss from a third to a half. I have never seen a tetanic contraction of the uterus follow its use nor can I recall a single instance in which the expulsion of the placenta was not spontaneous. Moreover, the uterus is usually so firmly contracted that further bleeding is negligible. In order to maintain this state of contraction throughout the first few days of pregnancy it is my practice, as soon as the patient is sufficiently awake from the anesthetic, to give a dram of ergot by mouth and repeat it every 4 or 5 hours until 6 doses have been given. For the next 3 or 4 days I give from 1 to 3 doses daily, depending on the amount of lochia and its color and odor. Firm contraction of the uterus is most important as many slight rises in temperature during the puerperium and even occasional sharp elevations are due to puddling and stagnation of the lochial discharges from a flabby, uncontracted uterus. Fowler's position is useful in encouraging drainage and limiting absorption and, as occasionally happens, where blood clots block the internal os with consequent collection and putrefaction of the lochia, small doses of pituitrin by needle will overcome the condition, or a simple examination may displace the offending clot. Free movement, which I shall mention in some detail later, is also a valuable prophylactic measure.

Unless the lochial discharge is considerably diminished by the sixth or seventh day it should be controlled by ice caps to the abdomen or small doses of pituitrin or ergot. After the tenth day it should be practically colorless. Patients who are allowed to lose blood in small amounts for weeks, not to mention the heavier flows, will inevitably end with anemia, constipation and digestive and nervous symptoms, as well as inability to nurse the baby. My

\*Read before the Orleans Parish Medical Society, Feb. 9, 1925.

patients are advised to report to me on the fifteenth day if the lochia are not entirely colorless. Ergotine is prescribed, 2 grains twice a day for 10 days, the medication to be continued over that period even if the flow is absolutely checked as the whole condition is a manifestation of tardy involution of the uterus. Daily douches are recommended for the next 10 days and then 3 times a week for the next 5 weeks. If the ergotine fails to check the flow and inspection with the bivalve speculum shows no pathology, the cervix and vault of the vagina are painted with iodine, the excess being wiped out with alcohol, and an ichthyol and glycerine tampon is inserted. This treatment is repeated every second day until the bleeding is checked. The knee chest position is helpful twice a day for 10 or 15 minutes.

Naturally strict asepsis is to be maintained throughout the lying-in period and in this connection I should like to point out the dangers of vulval pads applied tightly against the external genitalia. They collect discharges which are always infected, and diminish free drainage, and in my opinion are responsible for many mild infections and some serious ones. The pad should be tied loosely or even allowed to lie on the bed, and should, of course, be changed frequently. Particular care should be exercised in the presence of lacerations.

The bladder should be emptied within 8 hours after delivery and at least every 6 or 8 hours during the first few days. If this is difficult, warm irrigations over the vulva, hot applications to the bladder region, or the instillation of 3 or 4 ounces of warm glycerine into the rectum will usually result in a spontaneous act. The patient may even be raised to a sitting position if the lacerations have not been extensive. The catheter should be a last resort, but if it is necessary, it should be used regularly every 8 hours as fewer instances of cystitis will result than if the bladder is allowed to become enormously distended. The old custom of drastic purgation on the third day is pernicious; it exhausts the patient, depletes her system of needed fluids, and has been definitely proved to be responsible for many temperature elevations at this time. A simple oil and glycerine enema on the second morning, repeated daily as indicated, is a satisfactory measure entirely devoid of these disadvantages. After the patient is out of bed the simplest laxative which will answer the purpose without discomfort or dehydration is best; the various mineral oils are excellent. Careful

irrigation and cleansing of the parts must follow every evacuation.

I can see no reason why the puerperal patient should not have practically a full diet from the start. Where the labor has been long and tedious and has culminated in operative delivery the situation is rather different and the diet is restricted to fluids for the first 24 hours. After that, and in other cases immediately after delivery when nausea has passed, soft diet is given at once and full diet within the next 24 hours. Fluids are forced at all times and fruit juices are included. As a matter of fact, there is no reason why a nursing woman should not be permitted to eat anything she is in the habit of eating which does not disturb her digestion. In the average case after the first 48 hours the patient is given 3 regular meals a day and nothing more. The giving of food, milk, beer, etc., between meals and during the night is not only unnecessary but such cramming is bound to have a deleterious effect on a patient confined to bed without exercise of any sort.

My personal preference is to omit the use of the abdominal binder. It has no purpose other than to eliminate the uneasy feeling the patient experiences when the heavy uterus drops from side to side as she turns in bed, and I have seen more than one postpartal hemorrhage follow its tight application too soon after delivery because the heavy uterus was pinned down and constricted between it and the promontory of the sacrum. If the patient insists I permit its use, particularly if she is a multipara, but it must be very loosely applied.

At least for the first 4 or 5 days I endeavor to restrict visitors to the immediate family and I urge that their stay be limited to 15 minutes or less. I need not say that this is a rule I have never been able to enforce successfully, but its wisdom is manifest. Freedom of movement is permitted almost from the first, even where lacerations are present. The old idea of keeping the patient flat on her back is all wrong. My patients are encouraged to move from side to side within a few hours after delivery and I permit them to sit up in bed, of course, properly supported, as early as the third or fourth day. Another exploded idea is that of allowing patients out of bed on the ninth day for no consideration other than that it happens to be the ninth day, without regard to lochial discharge, the position of the uterus or their general

well-being. Rest in bed is essential until the discharge has become almost entirely serous in character, and the uterus has become well retracted below the symphysis. The latter point should always be determined by vaginal examination. The patient sits up for gradually increasing periods for two days and walks about on the third day. Stairs should not be attempted under a month, though short walks are permitted after the third week. After the seventh week moderate setting-up exercises should be encouraged. Ptosis is a frequent complication of the puerperium and for that reason the patient should be instructed, as soon as she begins to move about, to fasten her binder snugly or to put on her corsets while lying down. All attempts at dieting and reducing should be strictly interdicted.

No amount of prenatal care and attention to the nipples is anything like as important as keeping a hungry baby away from a dry breast. If this is not done fissures and abrasions are bound to follow and they, as you know, account for practically one hundred per cent of breast infections. From 8 to 12 hours after birth is soon enough to put the baby to the breast and nursing is not permitted oftener than every 4 hours for 5 minutes until the milk flow is well established. Then a regular 3 hour schedule is instituted for 15 minutes at a time, eliminating night feedings as much as possible. For the first 10 days a thin film of borated vaseline is spread over the nipples and protected with sterile gauze or wax paper. Boracic acid should be used before and after each nursing, but alcohol or any other agent which will remove the natural lubrication of the nipple is never permitted. The hard lumps so often found in the breast are really due to the twisting of the veins as the breasts drop into the axillae from their own weight, and not, as was so long supposed, to the caking of the milk. Therefore, as soon as the breasts begin to feel heavy or the least sign of engorgement appears a supporter is applied to hold them well up and towards the mid line, usually supplemented with pads of cotton at the outer lateral borders. The purpose of the binder is defeated if the breasts are dragged out of their natural position, therefore the proper application is most important. It should be gradually tightened as indicated. If engorgement should occur, hot stupes applied for 15 or 20 minutes every 3 or 4 hours will usually give relief. The breast pump and massage should have no place in the treat-

ment; they do harm and certainly nothing more painful could be devised.

An examination 6 or 8 weeks after delivery is usually routine with specialists but is too often overlooked entirely by general practitioners. It is assumed that all perineal lacerations have been repaired at once. The immediate repair of cervical lacerations is usually frowned upon, and rightly so, since the results are seldom satisfactory. If such tears are neglected, however, the resulting erosion and eversion of the external os will lead to disturbances of circulation, chronic glandular infections and ugly discharges, and some treatment is demanded. I have found that from 1 to 3 applications of the small cautery, a perfectly feasible office procedure, will burn down the excessive glandular proliferation and allow the epithelium from the vaginal surface of the cervix to cover the affected area. Tampons are used in the interval between treatments. The results have been most satisfactory; there is less scar tissue, less chance of sterility and fewer difficult labors when pregnancy supervenes than could possibly result from any type of surgical repair.

Uterine displacements are also frequently found at the time of this examination. If they are not giving rise to symptoms and the uterus is well contracted they may safely be disregarded, but if the uterus is larger than normal and soft in consistency, chronic engorgement is the result, with menorrhagia and dysmenorrhoea when menstruation is re-established. Tampons and douches, the knee chest position, sometimes the use of a Smith or Hodge pessary are all that is necessary, for it is astonishing how rapidly such displacements disappear when the uterus regains its normal tone.

I have endeavored to outline to you the procedure which I have been using with excellent results in my own baby cases. For the most part it is based simply on common sense and involves very little extra effort on the part of the physician other than a modicum of attention to his patient after she is delivered, which will be more than compensated for by the healthy, satisfied women such treatment invariably produces.

#### DISCUSSION.

Dr. J. F. Dicks: The point I wish to bring up and lay more stress on is that we are not examining our patients carefully enough after delivery. Years ago we were satisfied to make a vaginal examination after the

six weeks had elapsed, then pass the case up, perfectly satisfied that everything was normal. Dr. Lynch of San Francisco has proved that forty per cent of uterine displacements are found in cases of normal deliveries. If we examine them, not only six weeks after delivery, but within the year, and find these displacements, we can do something for them. If over a year or a year and a half is allowed to elapse before we discover the displacement it brings it down to a surgical procedure. Displacements can be classified as recent when occurring within a year, and old when longer than a year. In recent displacements where the relaxation is slight, by tamponing in the correct position we can do away with a great deal of surgery. If we paid more attention and examined our patients subsequent (within a year) to the examination six weeks after delivery, we would make a great point in gynecology.

Dr. W. E. Levy: There is a great amount of common sense in this paper. The routine is practically the same as we follow at Touro. Some points should be emphasized, one of which is diet. We have for the past four years, at Touro, given a full diet and found no ill results. I see no reason why a woman who has gone through normal labor should not be able to eat anything—her abdomen has not been opened. True, if there is a very great laceration involving the sphincter, that is another story.

Another good thing is the practice, after the second or third day, of making the patient lie for an hour on her abdomen each morning and afternoon. The post-partal uterus is a great big thing with loose ligaments. By making the mother lie in this position twice daily you favor drainage. I notice in our clinical work we have cut down a great many post-partal retroversions. The most successful method, after a month or six weeks, is the douche and tampon and the application of the Hodge pessary. It is awful to see a suspension done, six or seven months after delivery, on a patient with a perfectly movable uterus, because during the next pregnancy the whole thing is coming down and she has been subjected to a perfectly useless operation.

Regarding the breasts. Dr. Miller's friend, Jellinghaus, showed me a little trick. Instead of a breast binder that has to be removed at every nursing, or at any other time one cares to tend to the nipples, he takes wide strips of Z-O, placing these above and below the breasts, then gets the nurse to hold the breasts towards the midline, running big bands down on either side to the midclavicular line. The support, as long as required, is permanent, and you can apply ice bags or any other therapy nicely. The application of 5 per cent resorcin to the nipples with fissures, etc., washing off carefully before each nursing, accomplishes two things: it softens and lubricates and takes care of the fissures which are the starting points for the breast abscess.

Dr. Hilliard Miller (concluding): I have nothing more to say except to comment again about the diet for the puerperal patient. I am not inclined to believe that articles of food have any influence on the milk supply. I do believe that a well-balanced diet, irrespective of articles of food, is a conducive factor to a well-balanced and generous quantity of milk. This also applies to the influence that laxatives or purgatives may tend to show. Any disturbance resulting from laxatives or purgatives is due entirely

to limiting the quantity of milk by the dehydration they produce, rather than to their being secreted through the milk and influencing the baby in that way.

## SUB-ACUTE BACTERIAL ENDOCARDITIS WITH REPORT OF A CASE\*

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SHREVEPORT, LA.

In a review of the literature on sub-acute bacterial endocarditis the first record of the clinical picture of the prolonged form which Blumer was able to find was an article entitled "On some of the principal effects resulting from the detachment of fibrinous deposits from the interior of the heart and their mixture with the circulating blood," by W. Senhouse Kirkes in 1852. In 1885 Sir William Osler in his *Gulstonian Lectures* first called attention to the disease in its varied forms. The peculiar skin lesions which have received the name of Osler's sign were also noted between 1873 and 1900 by different observers. In 1899 Mabel Austin described the first case due to bacillus influenza.

Since the beginning of the present century the most important contributions have been by Koeniger, Lohlein, Libman, Coombs and Clawson on the pathological side; Scottmuller, Rosenau, Horder, Major, Kinsella, Fox, Lynch and Clawson on the bacteriological and serological aspects; Osler, Libman, Billings, Vacquez, and Kostner on the clinical viewpoints.

An exact agreement as to just what is meant by sub-acute bacterial endocarditis has not been reached. Libman has included such conditions as are frequently called chronic ulcerative endocarditis, chronic malignant endocarditis and endocarditis lenta. He does not consider valvular defects resulting from rheumatic and syphilitic infections as being of the sub-acute type. He classifies endocarditis as rheumatic, syphilitic, and bacterial. He subdivides the bacterial into acute (lasting up to about six weeks) and sub-acute (lasting from four to eighteen months or more).

Blumer classifies all protracted cases as sub-acute. Some of the different names that have been given to the condition are as follows: Chronic ulcerative endocarditis (Riesman), Sub-acute infective endocarditis (Libman), Endocarditis Lenta (Scottmuller), Chronic septic endocarditis (Heubner), Chronic streptococcus endocarditis (Litten), Chronic malig-

\*Read before the Tri-State Medical Society, Shreveport, La., Jan. 14-15, 1925.

nant endocarditis (Weber). The term malignant was objected to because it throws no light on either the etiology or pathology; septic, because there was no pus formation; ulcerative because the lesions are much more frequently proliferative than destructive; infectious, because it would include rheumatic and syphilitic.

Blumer states that unfortunately there are few accurate figures covering the frequency of sub-acute bacterial endocarditis as compared with the other three common infectious types, rheumatic, syphilitic and acute bacterial.

In 1918 Libman stated that he had personally seen nearly three hundred cases as quoted by L. C. Montgomery.

Blumer finds it difficult to say whether the disease is actually increasing or whether there is an increasing ability on the part of the profession to recognize the condition.

The lesions are due to two principal factors, (1) the toxemia a necessary accompaniment of an infectious process, (2) the mechanical factor, the lodgment of emboli of various sizes in the different organs of the body, detached from the diseased endocardium.

The lesions in the heart usually show involvement of valves already damaged by previous endocarditis. As the inflammatory process is usually engrafted on already damaged valves there may be no change in the pre-existing physical signs with on-set of sub-acute bacterial endocarditis.

Involvement of mural endocardium and chordae tendinae and slight impairment of myocardium also occurs.

It has been fairly definitely proven that the disease has a tendency to attack damaged valves; in one hundred fifty autopsies 38% showed evidence of old valve lesions. Blumer thinks that a more careful study of autopsies would show a much larger percentage of cardiac lesions. The frequency with which the mural endocardium is also involved is important as in one hundred fifty autopsies, 55% showed involvement of either the walls of the cavities, or the chordae tendinae or both, pathological conditions of myocardium observed to be slight in one hundred fifty autopsies and in the nature of fatty degeneration or cloudy swelling.

The more important extra-cardiac lesions are (1) vascular, of which embolism is the most frequent, the favorite sites being the aorta, pulmonary vessels, coronaries, iliacs, arteries of extremities and above all the cerebral vessels.

Thrombo-phlebitis in the veins of lower extremities has been observed at times. Embolic aneurisms were observed nine times in one hundred fifty autopsies.

The striking feature of embolic phenomena in sub-acute bacterial endocarditis is the lack of suppuration, possibly due to low virulence of infecting organisms or to the small number of organisms present in some of emboli.

The characteristic kidney lesions were first pointed out by Lohlein in 1910. Macroscopically, the organs are only moderately enlarged, surface is usually smooth and covered with punctate hemorrhages "flea bitten." Microscopically, the lesions are described by Lohlein as an embolic focal nephritis; the lesion is due to lodgment in the glomerular capillaries of bacterial emboli.

When emboli occur in kidneys as usually evidenced by a sudden severe sharp pain in right or left lumbar region, the urine within twelve to twenty-four hours is observed to be smoky and blood tinged in appearance and on examination will usually contain a fair amount of albumen, numerous pus and red blood cells, hyaline, leucocytic and granular casts.

*Etiology:* Summing up the observations of different authors show it to be a disease of young adults and adolescence; it occurs during the period of greatest incidence of valvular heart disease from all causes except syphilis and arteriosclerosis.

*Sex:* Osler and Blummer make it 60% males and 40% females. The portal of entry of infecting organisms is very difficult to discover at times as shown in the case to be reported. The teeth, tonsils, and female generative organs are probably the most common offenders. There is a history of rheumatism in a large percentage of cases. Libman states that a past history of rheumatism is almost constant.

*Bacteriology:* Most observers point out that the two most common organisms concerned with sub-acute bacterial endocarditis are the streptococcus group and bacillus influenza. Libman gives streptococcus viridans 95%, bacillus influenza 5%. Libman and Celler have pointed out that the organisms grow slowly, colonies not appearing as a rule until thirty-six to forty-eight hours. It is necessary to watch plates at least eight days as proven in the case to be reported.

In one hundred forty-five cases of bacterial endocarditis in which autopsy was performed one hundred fifteen were streptococcal, twenty-eight pneumococcal,

twenty-six staphylococcus aureus, and four were staphylococcus albus in origin.

The clinical manifestations fall usually into two periods, (1) an early period in which symptoms are those of low grade infection, (2) A late period when signs of embolism predominate. In a great majority of cases the disease attacks patients with well compensated valvular lesions. The onset is usually slow. Weakness is the most frequent early complaint followed by fever, digestive disturbance, cardiac symptoms and sweats.

Emaciation is mentioned as a prominent feature. However, some patients remain well nourished up to time of death. Patients do not usually run a high temperature, the daily maximum being usually 102 degrees F. In some cases fever is accompanied by chills; in others by sweats and in others chills, fever and sweats occur in regular sequence.

The heart signs are usually those of mitral and aortic disease. Dyspnea is a common cardiac symptom. The pulse is not greatly modified until later on in the disease. Cough is a common symptom probably most often due to the liberation of small emboli which lodge in pulmonary vessels; also to an accompanying bronchitis.

Loss of appetite is a common complaint; also flatulency and constipation. Diarrhea is not infrequent. Vomiting is troublesome at times. The liver is usually enlarged from chronic passive congestion, the spleen from infarction in about fifty per cent of the cases. There is a moderate grade of anemia, a progressive increase or decrease of leucocytes.

The most common skin lesions are petechial spots, probably embolic in origin, appearing in crops as red, slightly elevated papules on the fingers, forearms, elbows, neck, axillary regions, and groins as the most common sites; they are often spoken of as Osler's painful nodules. The evidence of nephritis varies. About one-third of patients show clinical evidence of renal infarction.

The course as a rule is not progressively downwards as there are frequent remissions. But with few exceptions the disease finally ends fatally. Of two hundred eighty-one reported cases death occurred between the end of third and end of eighth week. In two hundred twelve or 75% only nine lived over sixteen months, and six of these lived over two years. The case to be reported lived approximately twelve months from date of onset of symptoms.

Osler states that the cardinal diagnostic features are fever, existence of an old valve lesion, embolic phenomena and positive blood culture.

The disease is most likely to be confused with neurasthenia in the early stages; malaria, typhoid, tuberculosis, pyemia with endocarditis, abscess of spleen, liver or kidney and pernicious anemia.

*Prognosis:* Recovery is rare. Billings in one hundred cases saw one recovery. Libman in one hundred fifty cases saw four recoveries. Blumer saw one case recover.

There is little to be said concerning treatment. The removal of local foci of infection often located in teeth, tonsils, sinuses, and female genitalia should be attended to as a prophylactic measure. Vaccine treatment is of little or no value. Autogenous vaccines are generally used. Blood transfusion has been tried with very little results.

The following case was observed in the Hospital of the Good Samaritan, Los Angeles, Cal. White, male, age forty-eight years. Complained on the eighteenth of April, 1923, of having felt tired for several weeks. He took his temperature that afternoon and found it to be 99.4 degrees F. Complained of feeling worn-out every afternoon and feverish. After discovering fever, took ten grains quinine daily for one month when he had a chill, and even though he continued quinine he still had fever from 99.6 degrees to 101 degrees F. in the afternoon. He would remain in bed in afternoons; also took cacodylate of soda. Went to a ranch in West Texas on June 16th remaining there about two weeks. Fever continued while there. From Texas he came to Los Angeles, Cal., entering the Good Samaritan Hospital July 12, 1923. During all this time had several night sweats. Bowels have been out of order for a number of months. Troubled considerably with flatulency and constipation. Did not complain of pain or aching. Loss of about fifteen pounds in weight since April. Hands and feet never swell. No dyspnea. No vertigo, but has a heart murmur. Appetite has been poor since April. No nocturia; no burning or frequency. Urine has been examined frequently and found to be normal.

*Past history.*—Denies typhoid, scarlet fever, when a child. Dengue fever in October, 1922, which did him up very badly for several months. Severe attack of influenza ten years ago. Heart murmur discovered several years ago.

*Physical examination* by Dr. E. Fishbaugh, July 12, 1923, Los Angeles, Cal.—Tall, very well nourished, gray-haired man, pupils equal and react normally to light and accommodation, tongue coated, teeth in excellent condition, tonsils not remarkable, superficial lymph glands not enlarged, thyroid gland palpable but not enlarged, no tremor.

*Chest:* Well developed. Lungs negative on percussion and auscultation.

*Heart:* Left border cardiac dullness extends to nipple line, right border to right sternal margin, systolic murmur at apex transmitted to left axilla and over entire precordium. Blood pressure



110/70. Radials and brachial arteries apparently not thickened.

Abdomen: Soft, flat, and moderately tympanic, liver edge palpable on deep inspiration. Spleen not palpable. No tender areas.

Rectal: Prostate normal in size and painless.

Reflexes: Superficial and deep are normal.

Extremities: No edema.

Laboratory: Urine negative except for trace of albumen.

Blood: Hemoglobin 78 per cent, red blood cells 4,170,000, white blood cells 9,040, differential count: polys 70 per cent, small monos 25 per cent, large monos 5 per cent. No malarial parasites seen. Widal test negative (dilution 1-40). Blood cultures on all media sterile after four days.

X-ray examination: Stereoscopic chest plates show moderate thickening about hilus of both lungs, moderate enlargement of heart.

Gastro-intestinal tract negative.

Progress notation Aug. 4, 1924. Afternoon temperature has continued as high as 101.4 degrees F., approaching normal in the morning. Slight cough past two days with dyspnea. Respiration between 30 and 38, and pulse as high as 104. Heart examination during period of observation shows a slight change in character of murmur at apex, it being a little rougher and louder. Impression of Dr. Fishbaugh was that of an endocarditis.

Returned home about Aug. 7, 1923, having stood trip from California fairly well. On Aug. 9th leucocyte count was 12,000, differential count: neutrophils 75%, large lymphocytes 10%, small lymphocytes 15%. There was very little change in his condition until the latter part of August when his pulse became more irregular, complained of dyspnea and cough quite often, daily temperature varied from 99.4 degrees to 101 degrees F., perspiring freely at intervals.

Sept. 12th Blood culture negative after plating for four days.

Sept. 17th. Patient complained of twinges of pain in elbows and knees.

Sept. 18th. Abdominal contraction with weakness, sweating and irregular pulse. Blood culture negative for organisms, plated four days.

Oct. 12th. Muscle and joint pain severe.

Oct. 18th. Small red spots observed on right ankle and somewhat painful.

Oct. 24th. Pain in joints very severe at times, few red spots on fingers.

Oct. 28th. Drenching sweats past two nights.

Nov. 18th. Pulse more irregular past two weeks. Complained occasionally of precordial pain, purplish red spots appearing in crops on fingers of right hand. Slight improvement in general condition since about Oct. 15th.

Nov. 24th. Left wrist painful and swollen. Red spots appeared again on right thumb and beneath eyelid.

Nov. 27th. Small red spots appeared on upper eyelids; these spots usually faded away in from two to four days. Sodium cacodylate grains 3 intravenously every other day for past month.

Dec. 12th. Complaining of pain over left kidney. Urine very cloudy and dark for the next several days, containing large trace albumen, red blood cells, pus cells, hyaline and granular casts.

Dec. 29th. Complaining of pain in chest. Cough very troublesome the following day. Examination of the chest the following day showed area of dullness beneath right scapula with bronchial breathing, increased voice sounds and subcrepitant rales (probably pulmonary infarction).

Jan 4th. Both hands very painful.

Jan. 14th. Few small red spots beneath right eye, complains of feeling chilly, nervous and restless.

Jan. 20th. Permitted to have back rest twenty-five minutes and daily thereafter and up in Morris chair.

Jan. 26th. Blood culture made on beef nutrient broth. The broth remained clear for five days and the smears failed to show any organisms. On the sixth day the broth started to show slight cloudiness and the cloudiness increased each successive day without showing any organisms until the eighth day when on stained smears we found several groups of micrococcus tetragenous (staphylococcus albus) surrounded with halo-like capsules. Transplants made on plain and blood agar showed no growth until the fourth day when we noticed several transparent colonies.

Bezancou has isolated micrococcus tetragenous from a case of meningitis. A single case of micrococcus tetragenous septicemia is on record reported in 1905 by Foneaca.

Feb. 9th. In reclining chair daily for short while since Jan 26th during previous night awoke with severe pain in left abdomen and flank (like renal colic) probably resulting from renal infarction.

Feb. 10th. Urine extremely dark (cloudy). Pain in left side continuous.

Feb. 12th. Urine clearer. Very tired and drowsy. Vomited.

Feb. 14th. Autogenous vaccine, four hundred million staphylococcus albus no reaction.

Feb. 18th. Vaccine—five hundred million and continued every five days up to March 6th.

Feb. 28th. Temperature remaining at a lower level, patient getting weaker, pulse more irregular and weak, heart flutters; up in chair at times.

March 6th. Red spots appeared on right wrist—Vomited—Urine very red.

March 8th. Large number small red spots on right elbow—temperature continued around 98 degrees to 99 degrees F.

March 12th. Vomited clear fluid. Right arm covered with bright red painful spots. Patient unable to speak. Vomited several times during the day.

March 13th. Very restless, extremities cold. Left hand badly swollen. Respiration labored. Pulse rapid and irregular.

March 14th. Condition still worse. Unable to speak, moaning, apparently in severe pain.

March 15th, 1923. Suffering with pain, muscular twitching. 11:00 a.m. severe convulsion, (probably cerebral embolism) respiration labored, four light convulsions between 1:00 p. m. and 5:00 p. m. when patient expired.

No autopsy obtained.

I wish to thank Drs. F. J. Frater and J. E. Knighton for the privilege of reporting this case.

## EYE EMERGENCIES\*

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NEW ORLEANS.*

Each of us is called upon more or less frequently to render emergency aid to injured or otherwise sick eyes. To the inexperienced, the efficient care of these patients may be a rather difficult problem, because of the usual impracticability in securing immediate outside information, either from books or associates.

This subject was selected by my post-graduate class as the one which could possibly be of the greatest help from an ophthalmologist to a mixed audience of general physicians.

The most common ocular emergency is caused by foreign bodies, usually in the cornea. Very few of our medical ministrations produce more and prompter happiness than the successful removal of an ocular foreign body, which involves anaesthesia, neatly and completely removing the foreign body, and preventing pain recurrence.

Anaesthesia may be obtained with one or two drops of a 4% cocaine, 2% butyn, or 2% holocain solution or ointment. The affected eye can be held open with a speculum, or fingers, either of the operator or assistant. Intense light and magnification, as well as ocular fixation, are often necessary.

It is important to remove the entire foreign body as quickly, and with as little damage to the eye as possible. Rust spots, which quickly form, because of their chemical irritation, materially delay healing. A scalpel, Graefe knife, Dix's spud or pointed hook-shaped needles, etc., may be used. More important than the kind of instrument, is its cleanliness and its use from the side rather than the point, which upon a quick uncontrolled movement, increases the danger of puncturing the eyeball. I have perfected, and am having made in rustless steel, an instrument for this purpose, which is adapted for cutting, drilling, craping or levering with a minimum risk of perforating or otherwise damaging the eye.

Having removed the foreign body, our next problem is further relief from pain, usually dependent upon healing of the corneal epithelium, which generally takes place in from three to six hours. Pain may

be lessened by the use of any non-irritating ointment, such as ordinary vaseline, with or without drugs, like yellow oxide of mercury 1%, bichloride 1/30%, boric acid 10%, on account of the minimized friction between the abraded cornea and the lid. More prompt and painless healing is perhaps facilitated by the incorporation of drugs which produce analgesia, stimulate healing and minimize bacterial growth. We use, for this purpose, an ointment containing vaseline, 1% novocaine, 1% balsam of peru and 2% orthoform, in small probe pointed collapsible tubes. Should you so desire, we will gladly send an experimental quantity.

After removal of the foreign body, irrigation of the eye with any non-irritating solution and installation of an ointment as mentioned, preferably a gauze adhesive dressing is applied to the closed eye to minimize handling and infection, and the patient is instructed to keep both eyes closed as much as possible until the following day, when the cover is removed. If the eye is apparently entirely well, the patient can resume work, if not, the patient is instructed to return for further treatment. It is practically impossible to immobilize one eye with the other eye open, hence the advisability of keeping both eyes closed to minimize pain, which is increased by friction. In a rather large industrial practice I have been surprised at the small number of patients who have returned after the removal of corneal foreign bodies when the eyes have been treated as described.

Perhaps next in frequency are abrasions or slight surface defects, often following previously removed foreign bodies. The cause of this discomfort is difficult to see, because the distortion of the corneal reflex over the affected area, is often very slight and visible only with magnification or staining. The treatment is essentially that following the removal of foreign bodies.

Inverted lashes are a frequent cause of a sometimes sudden and apparently unexplained ocular discomfort. In removal it is important that the lashes are not broken because their stubby ends only aggravate discomfort.

In electric burns light sensitiveness is intensified to an extreme degree. In the slight forms we advise cold applications every one or two hours, avoidance of light, with dark glasses or confinement in a dark room, and the use of a bland ointment, preferably with holocain 1%, applied every two or three hours. In more severe burns of this type, homatropin or atropine is of

\*Read before the Orleans Parish Medical Society  
February 9, 1925.

advantage. Electric burns are essentially light and not heat burns, and heal rather slowly.

Burns of the lids, conjunctivae and cornea, from heat or chemicals in solid, liquid or gaseous form are also among the more common ocular accidents. Heat burns are perhaps best treated by first cleansing with any non-irritating solution at body temperature and then by applying vaseline or any other protective non-irritating substance to minimize exposure to air, which intensifies the pain. Dark glasses are of course a necessity whenever the eyes are oversensitive.

Our first thought in the treatment in chemical burns is naturally the neutralization of the irritant, which necessitates an understanding of its general composition. Alkali burns such as lime, lye and ammonia are perhaps best neutralized by ordinary sugar water which forms an inert saccharate, and is employed in the strength of about one teaspoon to the pint as an irrigation every hour during the first day. It is especially important in lime burns to evert the upper lid and remove every particle, because if left behind the lime comes in contact with, and further burns the cornea. Acids are best neutralized by a solution of ordinary baking soda, about one teaspoon to the quart, applied in the same way. If these solutions are not at hand, do not lose time; but wash the eyes out thoroughly and quickly with plain water; the chemical neutralization is a minor factor.

In this connection it is well to understand that the various solutions commonly used in eyes, such as borax, boric acid, normal salt, and a legion of others, probably practical, have no bactericidal value whatever. They facilitate the removal of mucus and are non-irritating on account of their chemical composition and because they are isotonic with the tears; further than this they have no curative virtue whatever. Castor oil if not rancid is non-irritating and protective, if rancid, it is neither. Milk used as an ocular irritating fluid has no particular value and can induce infection. Potatoes, meat, oysters, eye cups, and the many other applications used by the laity are to be condemned because they are potentially dirty and facilitate infection. Atropine should be used only when positively necessary. Its indiscriminate and careless use often prolongs disability in eye emergencies and occasionally ushers in an attack of acute glaucoma which otherwise might not at

least have occurred for many years. The use of cocain solutions by the patient to relieve pain is only mentioned to be condemned, because cocain especially when repeatedly used not only destroys the corneal epithelium but devitalizes the ocular tissues and delays healing.

Insect stings or bites on the lids or eyeballs are usually painful but seldom serious. Several days, preferably with the use of bland ointment and protective glasses and with as little handling as possible usually restore the tissues to normal.

Hemorrhages in the lid and conjunctivae of themselves are usually not important except when they evidence intracranial bleeding. In seven to ten days the tissues usually resume their normal color and size, probably as well with as without therapeutic acid. Poultices, leeches, and other methods of treatment apparently accomplish nothing except occasionally to increase the bleeding and introduce infection.

Lens dislocation, which may follow any injury to the ocular tissues, is one of the serious complications to which we have in the past not paid enough attention. It is especially important that industrial surgeons observe and record slight changes in anterior chamber depth and pupil eccentricity or distortion, in order that the victim, who will probably suffer a more or less complete loss of sight because of cataract or glaucoma, may have a better chance to recover the compensation which justice and the law provide.

In perforating injuries of the eyeball, we have the more serious ocular emergencies which may involve intraocular infection, iris prolapse, traumatic cataract, increased intraocular tension, retinal detachment, etc.; conditions which are usually best taken care of by the experienced. In the absence of apparent infection, irrigation with a clean non-irritating solution, the instillation of a bland ointment and the application of a protective dressing affords, generally speaking, the best possible emergency treatment. The use of foreign protein injections; such as ordinary skimmed milk; five to ten cc., previously boiled about five minutes, injected into the gluteal or scapular region, to increase infection immunity, is an experimental procedure apparently justified. If there is pus in the eye or other evidence of ocular infection, bandages should never be used, because retained infectious material only damages the tissues with which it comes in contact.

Occasionally contagious material such as

gonorrhoeal pus comes in contact with the eyes. Immediate irrigation with a clean non-irritating solution probably minimizes as far as possible the danger of infection, which at least partially depends upon minute conjunctival abrasions. Let us not forget that in connection with our use of the so-called conjunctival antiseptics, any aqueous solution is diluted to approximately one twentieth of its original strength in the conjunctiva within five minutes, hence the importance of using solutions such as argyrol, mercurochrome, and the legion, of others (which may or may not have bactericidal value), not less than every thirty minutes, if any possible curative virtue is to be expected. The treatment of conjunctival infections of one sort or another is hardly an emergency and is probably best cared for by the experienced.

Among the most serious of ocular emergencies is acute glaucoma, which often begins with one sided eye or head pain and in which the cornea is usually dull, the anterior chamber shallow, the eyeball always hard to the touch, and sometimes the pupil is large. The use of pupil dilating drugs such as atropine only produce irreparable harm. Never use atropine unless you are sure that it will do no harm and that it is positively needed. Drugs which contract the pupil, such as eserine 1/5% or Philocarpin 1%, solution or ointment, should be used at least three times daily in all cases in which the eyeball is apparently too hard, until expert advice is obtained.

In conclusion, if my presentation of this rather important subject has enabled you to understand a few of the fundamentals which underlie the efficient care of even a small part of the unfortunates who have immediate need of our services, my efforts have been more than justified.

#### DISCUSSION

Dr. W. R. Buffington: I have been very much interested in some of the things which Dr. Bahn has said. Foreign bodies on the cornea are considered so commonplace that most of them are removed, not by a physician, but by friends and neighbors of the patient who has the foreign body. The usual method is to take a pencil, or a handkerchief, probably containing nasal secretions, and remove the foreign body, sometimes taking off the epithelium as well. Most cases get well, but a number who feel all right after removal of the offending particle wake up with a sore eye, go to a doctor and find, sometimes that they have a serious pneumococcal infection.

We know that most small foreign bodies on the cornea are situated on the epithelium only, if injured, the repair is rapid, leaving no ill effect; but during removal one may break thru Bowman's membrane, in which case you are go-

ing to cause an opacity more or less permanent. Now, if you have a little infection that goes deeper in the stroma of the cornea, you may have a small central opacity that causes a great deterioration of vision. The statistics of any well ordered eye clinic will bear me out in the statement that more impairment of vision is due to opacity of the cornea than any other lesion of the eye; therefore the importance of always taking care of these little simple commonplace affairs.

It is a practice among doctors, not so much in cities as in the smaller places, in open lesions (uncomplicated) of the cornea to use bland solutions. It has been proven by experiment on rabbits eyes that if you take an ulcer of the cornea, like a traumatic ulcer, or abrasion, and wash it out with any kind of solution, you are going to prolong instead of hastening the cure of that lesion, so the best thing is to put the eye at rest and close it with a bandage.

I want to emphasize especially what Dr. Bahn has said about subluxation of the lens. I know that a slight subluxation will, by rest and miotic replace itself; but if there is rupture of the zonule and the subluxation more pronounced, the condition grows worse and the disturbance of the nutrition of the lens is going to produce an opacity sooner or later. A great many of these cases are taken care of by general practitioners, who do not recognize some of the symptoms of subluxation. Difference in depth of the anterior chamber, slight eccentricity and displacement of the pupil.

In speaking of perforating injuries of the anterior segments of the eye and threatened perforating ulcers, I know they are emergencies, certainly the injuries causing damage to the cornea and sclera require prompt treatment. I was sorry indeed not to hear Dr. Bahn give his opinion of the conjunctival flap method; a very simple and very easy surgical procedure. I think the conjunctival flap is probably one of the best therapeutic agents we have. By its judicious and proper application, many eyes can be saved with useful vision which otherwise would be lost.

Dr. M. Feingold: Realizing fully the limitations Dr. Bahn had to apply to himself in talking on the question of injuries of the eye, I shall act in the same way and speak on one or two points only.

It might be well to emphasize the contrast of our actions in two different classes of accidents. Dr. Bahn has mentioned, and Dr. Buffington has emphasized that we should use no washes after foreign bodies in the cornea, because of the likelihood of disseminating infection into the corneal wound. It is worse still to give the patient a wash, for we must realize that he will not adopt the latest aseptic methods in using the wash. It has therefore become the accepted method to bandage the eye under the assumption that no infection has occurred at the time of the injury and that the conjunctival is free of infective organisms. This procedure gives the wound a chance to close quickly and we are thus lessening the period during which infection can occur.

Contrast this with the other occasion, in which we are using abundant fluid. In all laboratories in which chemicals are used by a number of people, faucets discharging large quantities of water at the slightest touch are placed at convenient points in the room. This arrangement has for its purpose to provide a large stream of water which

will remove and dilute quickly all chemicals that have gotten into the eye.

To sum up: In one instance we avoid washes, but we seal the eye and allow the wound to close rapidly, assuming that it is aseptic, in the other, we use plenty of fluid to remove chemicals that have found their way into the eye.

The principle of omitting washes, but closing the eye and hastening the formation of epithelium by applications of oil or ointments into the conjunctival sac, applies also to the more serious injuries. In wounds of the conjunctiva, and in perforating wounds of the sclera or cornea the physician, in the country especially, must realize that the best thing he can do is to treat the wound as if it were absolutely aseptic; he must use no washes, but he should apply a bland ointment, put on a sterile dressing and ship the patient to the nearest one able to cope with the serious situation.

Dr. Chas. A. Bahn (closing): I am indebted to Dr. Buffington for having again emphasized the importance of cleanliness in the removal of foreign bodies, for so often doctors use at least not their cleanest instruments in the removal of foreign substances from the eye. This applies especially to those who only occasionally come in contact with emergency eye practice.

The conjunctival flap method of covering the cornea was not mentioned because it is too technical for practical use by the family physician.

Dr. Feingold's contrast of the treatment of corneal foreign bodies and chemical burns, the former without washing and the latter with profuse washing is of practical importance.

## PNEUMOTHORAX THERAPY IN PULMONARY TUBERCULOSIS\*

SHIRLEY C. LYONS, M.D.

NEW ORLEANS.

The surgical treatment of pulmonary tuberculosis is just becoming established in this country, and in that respect we are very much behind our colleagues on the continent, particularly those in Germany.

It is my purpose to discuss the surgical treatment of pulmonary tuberculosis with special reference to pneumothorax, its indications and limitations. The procedures advocated which may be classed as surgical are:

1. Pneumothorax.
2. Apicolysis.
3. Partial thorocoplasty—with or without pneumothorax.
4. Extrapleural thorocoplasty.
5. Phrenectomy, used independently and with pneumothorax or thorocoplasty.

Pneumothorax is the remedy most extensively used for the treatment of pulmonovided the test and remains today the one

\*Read before the Orleans Parish Medical Society February 9th, 1925.

ary tuberculosis. While strictly a surgical procedure, most of the work on this subject has been reported by the clinicians, as it has fallen to their lot to treat the tubercular patient. To a large extent they have been forced to fight their battle single-handed.

With the advent of thorocoplasty the surgeons have turned their attention to the tubercular patient and are joining hands with the clinicians, realizing that those who have had a wide experience in pneumothorax have the advantage over the surgeons who have lately become interested in it as a stepping stone to the more elaborate surgical procedure of thorocoplasty. Through this association they are coming to a better understanding of its indications and contra-indications.

In 1822 the following remarkable sentence was written on the subject of pulmonary tuberculosis: "It has long been my opinion that if ever the disease is cured, and it is an advent of which I am by no means disposed to despair, it must be accomplished by mechanical means, or in other words, by a surgical operation." The writer, James Carson, the great physiologist of Liverpool, receives credit for first suggesting the use of artificial pneumothorax in the treatment of this disease. He further taught that a wound or abscess in the lung could be placed in favorable circumstances for healing, by placing the diseased lung in a quiescent state, thereby affording protection from the movements of respiration, which would be performed solely by the other lung, and the divided surfaces thus forced into close contact by the same resilient power which previously had kept them apart.

The principles which are here so clearly enunciated were, in 1888, put into practical application and employed by Forlanini, of Italy, in the treatment of pulmonary tuberculosis by the use of artificial pneumothorax.

In 1898, J. B. Murphy independently advocated the same procedure, but he gave priority to the Italian. This same principle led Brauer, in 1908, to advocate thorocoplasty for collapsing the lung in certain cases which would not permit of pneumothorax.

From our earliest records, we learn that rest has always been the recognized form of treatment for tuberculosis. To this has been added change of climate, vaccines and serum therapy, heliotherapy and X-Ray. Through all the ages rest alone has sur-oustanding logical procedure in the treat-

ment of this condition. However, it must be conceded that absolute rest has its limitations in a chronic tubercular subject, and especially in an individual in any stage of the disease who is called upon to earn a livelihood. As aids to rest, there have been added many mechanical devices for securing local immobilization of the lung, such as: strapping, belts, sandbags, instruction in slow breathing, jackets of various kinds, and bandages. We need go only a step further to realize that pneumothorax belongs to this group of mechanical devices for placing the lung at rest. The simplicity and safety of artificial pneumothorax and the success which has resulted from its application necessarily make this our first choice in all cases where collapse and immobilization of the lung seem indicated. We accept the fact that the only known cure for tuberculosis is rest, admitting that nature must do the work, provided conditions are so arranged that nature has a chance. We realize that in compressing the lung we enforce rest, thus doing away with one destructive process, and affording the building forces a chance to do their work. We are led to the conclusion that the treatment of pulmonary tuberculosis by artificial pneumothorax is fundamentally correct.

The next question which naturally presents itself is the one which has caused endless discussion, and the failure on the part of the medical profession to arrive at a definite understanding has been the only great handicap to pneumothorax.

What are the indications for pneumothorax? In the earlier days it was reserved for the cases which were considered hopeless and only after every other known method had been tried. As was to be expected of any treatment, when used only in hopeless cases, the results were not brilliant, but they were sufficiently encouraging to justify some workers to try it in earlier stages of the disease. Today many of those who have given the subject time and thought have concluded that if there is any doubt as to the patient's progress, he should be given the benefit of immediate pneumothorax. It is only by adopting this course that we are going to derive full benefit from the procedure and thus save many patients from a hopeless future and inevitable death.

Our ideas on this subject are best expressed in the words of Beggs: "In tuberculosis to wait for a last chance is to wait for a lost chance, and that a decidedly earlier treatment by this method is much to

be desired." Davies believes that "No case of pulmonary tuberculosis which has been diagnosed with a certainty is too early a one for treatment by artificial pneumothorax, provided there are no contra-indications." He further states that he has never regretted doing artificial pneumothorax in any case, but has often regretted his failure to do so. Shaw, Mining, Morelli and many others, including the late J. B. Murphy, share a similar opinion.

While formerly it was made use of as a last resort, at the present time it is advocated and used by the conservative worker in the following cases:

1. In repeated and severe hemorrhage.
2. In unilateral progressive disease.
3. In patients who become afebrile in sanatoriums but have cavities, sputum and bacilli persisting, even though there is limited activity of the opposite lung.
4. In chronic cases with periodic lapses into activity with the disease confined to one side.
5. To replace serous or purulent effusions in a tubercular subject.

It is our belief that some time in the future the limitations placed on indications for artificial pneumothorax in tuberculosis will be guided solely by the operator's experience and as our experience increases, the indications for its use will increase. When that time comes, the physician who sends a tubercular patient from climate to climate in search of health, and after trying everything else in his efforts to check the ravages of the disease, advises pneumothorax only as a final resort, will be regarded in the same light as the practitioner who advises a female patient to wait a few months or years before seeking surgical advice for tumor of the breast.

Contra-indications depend entirely upon what the operator considers indications. As a rule, absolute contra-indications are:

1. Extensive disease with diffuse activity in the good lung.
2. Serious cardiac embarrassment.
3. Extensive tubercular processes involving other parts of the body, such as kidneys or intestines.
4. Adhesions which absolutely prevent entrance into pleural cavity in spite of repeated efforts.

The presence of adhesions which prevent the introduction of air into the pleural cavity makes a satisfactory pneumothorax impossible in two out of every three cases in which it is indicated and attempted. This is one of the good arguments for early use of pneumothorax, as the earlier we begin the treatment the less we are likely to encounter adhesions.

The best results in the surgical treatment of tuberculosis have been reported from clinics or sanatoriums where expert clinicians are associated with experienced surgeons. As a rule, pneumothorax should never be advised and instituted before consultation between at least two physicians. The patient should have had at least two months' observation under the usual sanatorium regime. Before instituting pneumothorax therapy, the patient should be acquainted with two important facts—first, that it is not a cure, but merely an aid, and that it must be continued for an indefinite period; second, the possibility of complications and the importance of prompt refills. At the beginning of the treatment the patient should be kept at absolute rest and under strict observation for at least six weeks after satisfactory collapse has been obtained, even though he has normal pulse and temperature. Initial treatment consists of small amounts of air (300 to 400 c. c. s.) at intervals of one to two days until satisfactory collapse results, which usually requires a period of 12 to 14 days. We next determine the degree of collapse best suited to the individual patient, as some require full collapse, while others do much better with only a partial collapse. We have next to discover how long the optimum degree of collapse will last without a refill, and this is best determined by X-Ray or fluoroscopic examination, as physical findings are indefinite after pneumothorax has been instituted. The amount of air to be given at each refill must be decided upon in each case, as the rate of absorption varies in different individuals. The refills should be given at intervals close enough to prevent expansion of the lung, as this might result in the formation of adhesions, and thus terminate the treatment. The object is always to keep the lung to rest. As time goes on it is usually found that the air absorbs less quickly and longer intervals may be allowed.

In the beginning, when adhesions are met with, preventing satisfactory collapse, the treatment should be continued in the hope of stretching the adhesions, and thus making an efficient pneumothorax possible. Very high pressures are not needed as the best results are obtained by giving frequent refills, leaving the intrapleural pressure constant. In the great majority of cases, the adhesions will stretch or snap without any serious consequence, and we obtain the desired results. The duration of the collapse depends on two factors: first,

the extent of the disease for which it was instituted. If in an early unilateral case, it might be discontinued within 1 1-2 to 2 years, provided the patient's general condition warrants it. Second, the general condition of the patient. If the patient is not doing well, or merely holding his own, it would be unwise to give up the collapse. In such a case it is usually best to establish a permanent collapse by thorocoplasty.

Complications occurring during pneumothorax treatment are:

1. Sero-fibrinous pleurisy.
2. Tuberculosis or non-tuberculosis empyema.
3. Sub-cutaneous emphysema.
4. Air embolism.
5. Hemorrhage.
6. Spontaneous pneumothorax.

It is estimated that 50% of all cases treated over a long period of time develop pleural effusion, and that a relatively small proportion of these result in empyema. Sangeman has shown that the occurrence of effusion does not interfere with the ultimate outcome of the case. Cases which develop empyema must be treated as conditions permit, using thorocoplasty, if possible, as this is the only means of bringing pleura to pleura, thereby obliterating the pleural cavity. Subcutaneous emphysema occurs frequently and is of no consequence. Air embolism has been reported, but can be entirely avoided by the careful operator who takes the precaution always to visualize the oscillations of the manometer before permitting air to enter the pleural cavity. Hemorrhage and spontaneous pneumothorax are the result of faulty technique and can be entirely avoided.

From the above facts it is readily seen that the dangers of the treatment are relatively few. We cannot promise the patient that the duration of life will be more affected by this treatment than by any other method, but every individual familiar with the effects of a successful pneumothorax can assert that the relief from symptoms is usually so great and so prompt that it should dispel all adverse criticism. As a rule, in a satisfactory collapse, there is immediate freedom from cough and expectoration, fever, and septicemia. The bacilli disappear from the sputum in a short time. The patient is so improved that he may return to his home or his work without any fear of spreading infection or contaminating his surrounds. Moreover, the time required to affect these striking results is much shorter than that required by other methods.

We agree that the life led by a chronic

tubercular patient is not one to be envied. Indeed, there is little happiness left them beyond the mere fact of living. They are incapacitated, and are a menace to their friends and families, as well as to the community. These patients have readily welcomed artificial pneumothorax on the ground that it makes life worth living and in so doing actually prolongs life.

Pneumothorax has a field of usefulness in the treatment of bronchiectasis, central pulmonary abscess, wounds of the lung, and in certain intra-thoracic conditions for diagnostic purposes.

In the production of artificial pneumothorax we have a simple, comparatively harmless therapy, which has heretofore been used in the more hopeless cases, but which offers a useful means of controlling the disease in its early stages. In properly selected cases, relief is prompt and effective. The dangers of pneumothorax are so slight that they may be considered negligible. It is indicated in all cases of repeated and severe hemorrhage, no matter in what stage of the disease. The indications and contra-indications are based to a large extent on the operator's experience and skill.

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#### DISCUSSION

Dr. M. J. Gelpi: The question of pneumothorax, as brought out by Dr. Lyons, is certainly of great interest and we ought to be very grateful to him for trying to stimulate interest in an old procedure which, so far as I know, has not been used to the fullest extent in our community. From all I can gather this treatment has been used by comparatively few men considering the large amount of material we have.

Some of the points in the history and development of pneumothorax are interesting. First came Dr. John B. Murphy with his epoch making paper. He read this paper dealing with pneumothorax as a possible cure for tuberculosis and shortly afterwards he went on a vacation. When he came back he was flooded with tuberculosis

patients and swamped with letters. The press had taken it up in his absence and he did not know what to do with the multitude of applicants for treatment. He made up his mind then and there, that either he would continue to do surgery or devote the rest of his life to treating tuberculosis. You know his decision, and he recommended his tubercular patients to the medical men associated with him. Fifteen years after he was still talking about looking over four or five hundred cases that he had occasion to observe and was still speaking well of the results of pneumothorax.

Then, the plan of treatment went over to Vienna, from Vienna to Germany, finally coming back to this country and, judging from reports, it is receiving now (away from here anyway) a good deal more attention than it ever has before. Therefore the presenting of this paper by Dr. Lyons now, is opportune and may prove of considerable value to us. Perhaps one of the reasons why the work was not taken up more extensively here in the past, was that so many old cases were originally treated; my impression is that Dr. Durel's cases were, in the majority of instances, old cases. With a certain degree of co-operation between the medical men and the surgeons, more might be accomplished in the future. Also, if the technique is reduced to the utmost simplicity, a great deal more work is likely to be attempted.

The plan has unquestionable value as no one can doubt, who has observed the effect in hemorrhage. Undoubtedly also, in cases of deep-seated abscess, even with one or two injections in the pleural cavity, the result is striking. It would appear therefore that pneumothorax has a definite field of usefulness, and makes us feel that we ought to do more of it hereafter than we have at any time in the past.

Dr. S. Hobson: I think Dr. Lyons is to be congratulated on bringing before the Society tonight such an important therapeutic method as the treatment of tuberculosis by pneumothorax. During the past few years I have had the good fortune of seeing a number of cases of tuberculosis so treated, and of treating quite a few myself by artificial pneumothorax.

The ideal cases for this treatment are those of early tuberculosis, running high temperature and not responding to the usual method of rest, etc. To bring the temperature down a collapse of the affected lung usually gives good results, provided the lesion is unilateral, with the other side functioning well. In the case of hemorrhage, especially repeated hemorrhages, it always acts well. I have not had many such cases, but all the cases I have seen or handled myself, have responded immediately, except one, in which there was massive consolidation on one side and the bad lung could not be collapsed on account of this consolidation.

As to the indications and contra-indications, I agree on a whole with that which the doctor says. Late cases are very bad and should not be attempted because, as you know, in those advanced cases, the involvement is not unilateral but bilateral. In cases of chronic lesion (definite tuberculosis), you have some degree of cardiac changes, adhesions are very dense, and many times, it is impossible to do anything, the adhesions firmly and thoroughly connecting lung to pleural surfaces. The procedure Dr. Lyons outlined as to the dose of air is important. It is



well to give a small amount repeated in two or three days, generally 100-200 c. c. Watch carefully, while administering, paying attention to the manometer and never allow your pressure to be anything but negative.

The refills should be guided by the patient's condition. Physical examination, fluoroscopic and X-Ray examinations are absolutely essential in proper handling. In cases where there are complications, serofibrinous pleurisy for instance, which I have seen in a few cases, the fluid can be withdrawn and the air introduced. Air embolism and spontaneous pneumothorax, as the doctor said, are due entirely to faulty technique. It is my opinion that artificial pneumothorax when judiciously used, is an important method in the handling of early tuberculosis and moderately advanced cases where there is not too much or practically no involvement of the opposite lung.

Dr. Emmett L. Irwin: Last summer it was my good fortune, at Rochester, to have the opportunity of observing in the Section of Thoracic Surgery, a great number of cases of tuberculosis in the various degrees of the disease and stages of treatment. The results were most interesting and gratifying, not only in the early cases, but in the more advanced cases as well.

I was glad to have the privilege of hearing Dr. Lyons' valuable paper tonight and believe Therapeutic Pneumothorax has a definite place in the treatment of pulmonary tuberculosis. It is progressing elsewhere and is an advance (as Dr. Guthrie has stated) that must be backed up surgically by the medical man, presenting a wonderful opportunity for co-operation between the surgeon and physician.

As far as the question of embolism is concerned—Morelli, reporting one thousand cases, believes he has almost conclusively shown by the absence of a single case of air embolism, that this phase of the subject should be eliminated from the argument. He contends that where air embolism occurs it is caused by faulty technique. We cannot help but think that the repeated introduction of needles and instruments into the pleural cavity must be associated with a certain amount of danger, however, if the procedure is cautiously and aseptically carried out, the danger is at a minimum. Unfortunately, any surgical procedure we have today is not without danger, but if carefully executed the complications and dangers are minimized.

In closing, I should like for Dr. Lyons to tell us what pressure he uses in the beginning, and what serves him as indications for the time limit of the interval between subsequent introductions of air and pressure for the same.

Dr. W. J. Durel: I think we owe the revival of artificial pneumothorax in America to a woman, Dr. Mary E. Lapham, and to Dr. M. F. Sloan. This treatment was reported at the 1912 meeting of the National Tuberculosis Association, and since that time has made quite an advance and has proven to be a valuable asset in the treatment of pulmonary tuberculosis. The consensus of opinion today, i. e., the opinion of the highest authorities on the subject is that—artificial pneumothorax should be used only in certain cases where the hygienic-dietetic treatment and accessories have failed to show any effect upon the "activity" of the lesions. The patient who is steadily improving in his physical findings and clinical symptoms does not require lung collapse, regardless of the stage of the disease. This is

the opinion of the majority of authors, not that of one of two enthusiasts.

I have been using artificial pneumothorax in the Charity Hospital of New Orleans, since 1912 or 1914. At present, the dangers of lung collapse have been greatly minimized, but there is still a hazard in its use. In the last issue of the American Review of Tuberculosis, three cases of air embolism in artificial pneumothorax are reported, with one death and autopsy. The indications for lung collapse will depend upon the lung findings and the clinical and social aspects of each individual case. The time is past when lung collapse is to be used only in moribund cases; but, it certainly should not be used in the less advanced cases that are improving under other forms of treatment.

The three types of artificial pneumothorax that are mostly used today are as follows: 1st. The selective type, where only a small amount of air is introduced in the pleural cavity—this air compressing only the diseased area that has lost its resiliency. In the selective or partial collapse, the manometer readings always remain negative. 2nd. The collapse of rest, or that in which a quantity of air is introduced in the pleural cavity to equal the atmospheric pressure. Here the manometer registers close to the zero mark. 3rd. Complete collapse, where the lung is compressed to its greatest extent, and where the manometer readings are always positive.

Remember the burden of respiration falls upon the non-collapsed lung; therefore, the two first types of artificial pneumothorax do not greatly handicap the contralateral lung, and are less susceptible to cause a "reactivity" in this lung. Rest is not the only good derived from lung collapse, but drainage and fibrosis are chiefly to be anticipated as favorable results in the advanced cavity cases. In hemorrhage cases with thin wall cavities, it is difficult to determine from which lung the bleeding occurs. In a case of severe pulmonary hemorrhage in a Charity Hospital nurse, I compressed the lung showing more extensive lesions, and then to find the bleeding continuing more than ever. After decompression, I located the bleeding and found it coming from a caseous ulcer in the opposite lung which showed but a few physical signs. I certainly do not think that all cases of hemoptysis should be collapsed. However, in recurrent and incessant hemoptyses, with a free pleural space, it is the ideal treatment. Unfortunately, the air must be replenished every week or two weeks, and this question of refilling is taxing to one who has not the necessary assistants.

In the Charity Hospital we use hospital air instead of nitrogen. Evidently it is good air since, fortunately, we have not had a single infection. Nevertheless, we have paid strict attention to asepsis in all our cases, whether it be an initial collapse or a refill. The question of refilling is a problem to many and will remain so until we find something that will not be absorbed and that will remain in the pleural cavity without irritating the pleural layers, yet retaining a partial or complete collapse of the lung. The accumulation of fluid in the pleural cavity is not a serious complication, and I never remove a sterile fluid from the pleural cavity. I have had many who owe their life to the presence of extensive pleural effusions, which should not be interfered with, unless there is a great displacement of the heart. The first or initial compression is the

most delicate, because the pleural layers are close together; and if there are adhesions about the pleural cavity, one does not know when he has entered the pleural space until the manometer registers negative.

Rule never to be forgotten: Do not connect needle to air tank until your manometer shows a negative reading. A great trouble that often manifests itself, especially if you have a flexible mediastinum, and more so in cases where there is no fibrosis of the lung—is a displacement of the heart which leads to distressing symptoms. It is a rule adopted by most phthysiologists today, never to collapse a lung to the point where the manometer shows a positive reading. You can accomplish the same results with a negative or zero pressure. The refills must be carefully done and considered. Unfortunately, when air is once introduced in the pleural cavity it may be the cause of serious adhesions. When I was sick two years ago, Dr. Hobson was nice enough to help me with several cases previously collapsed at the Charity Hospital. However, we could not give them the necessary attention by having our refills as often as needed. The result was that these cases did badly by forming adhesions and some eventually died. Collapse of the lung causes a compression of the arterial walls and favors fibrosis of the lung—the lymphatics being enlarged in the visceral area of the lung.

I just want to say this: Back of the Charity Hospital is the Breaux Building (for tuberculosis patients). I have been trying my best to induce surgeons to help me in the performance of thoracoplasties. Dr. Gelpi, when he was house surgeon, was asked not once, but on many occasions to help us out. I have now at least twenty cases. Please, gentlemen, come to my help. No one wants to go to the Breaux Building. I am glad to see such enthusiasm, glad to see pneumothorax revived, but next, take your coats off and give us a help, **Please.**

Dr. Shirley C. Lyons (closing): I thank you, gentlemen, for your discussions.

We are especially grateful to Dr. Durel for his remarks, as we realize that he speaks from a wide experience and from the standpoint of an expert on pulmonary tuberculosis.

My main hope in presenting this paper was to bring about a better understanding and agreement between the surgeons and internist. When that is accomplished, I think early artificial pneumothorax in tuberculosis will be established. Until such a time we must continue to disagree on some phases of this work.

As previously stated, I think the complications are negligible. While air embolism has been reported by several writers it can surely be avoided by visualizing your manometer oscillations before permitting air to enter the pleural cavity.

In regard to pressure readings—to illustrate—say your initial reading is —6 —8, at your first injection should increase this reading only 2 or 3 cc., or in other words, have a reading of —4, —6. Any sudden marked change in pressure readings should call for immediate termination of the injection. It should never be necessary to use very high pressures to obtain satisfactory collapse.

I don't think it makes much difference whether we consider this a strictly surgical procedure or not, so long as the operator exercises absolute surgical asepsis.

## A PRELIMINARY REPORT ON A SIMPLE AND EFFICIENT METHOD OF TREATMENT OF FRACTURES OF THE FEMUR\*

E. D. FENNER, M. D.

NEW ORLEANS.

The splendid results that can be obtained by skeleton traction through calipers, or Steinman pins, and the Thomas splint, under the direction of a competent and painstaking surgeon, are too well established to require other than favorable comment. But it is none the less true that there are obvious objections and drawbacks to skeleton traction. Either callipers or pin involve a wound of the soft parts, communicating with the bone, and there is always the possibility of infection of these wounds. The calipers have a most exasperating tendency to bury one point deep in the bone, while the other escapes and hangs loose in the soft tissues, causing a great deal of pain. The ordinary pins furnished by the surgical supply houses sometimes bend, or even break, because of the heavy weight attached to them. In the case of the aged, the porosity of the bones detracts from the satisfaction which might be expected from the use of this method. Moreover, the Thomas splint is a much more comfortable apparatus in an illustration in a book than it is on an actual patient in bed. Particularly in women, the upper ring, which is seldom an accurate fit, gets across the vulva, impinges upon the region of the anus, and soon becomes a source of distress and a receptacle for filth. I am perfectly aware of the fact that it is possible to prevent infection of the wounds from the calipers or pin by reasonable care; that the ring of the Thomas splint can be kept out of the vulva, and protected from soiling; that patients can be treated with comparative comfort and satisfaction by this method if they are properly supervised; and that the results, both functional and anatomical, which can be obtained are admirable. But the fact remains that a large percentage of surgeons are not really qualified to use this method successfully; that infection of the wounds is very common; that the callipers often slip, or bury one point and allow the other to become loose in the soft parts; and that the final results are frequently far from ideal. I make these observations not by way of reproach

\*Read before the Orleans Parish Medical Society, Jan. 26, 1925.

against the method of skeletal traction, but simply because they are the fact, and anyone who will walk through the wards of this or any other hospital of similar character will find no difficulty in meeting with examples of all these points. The truth is that the introduction of calipers or Steinman pins, and the after care of the patient in a Thomas splint is a major operative procedure demanding experience, training, and an attention to detail which are only too often lacking.

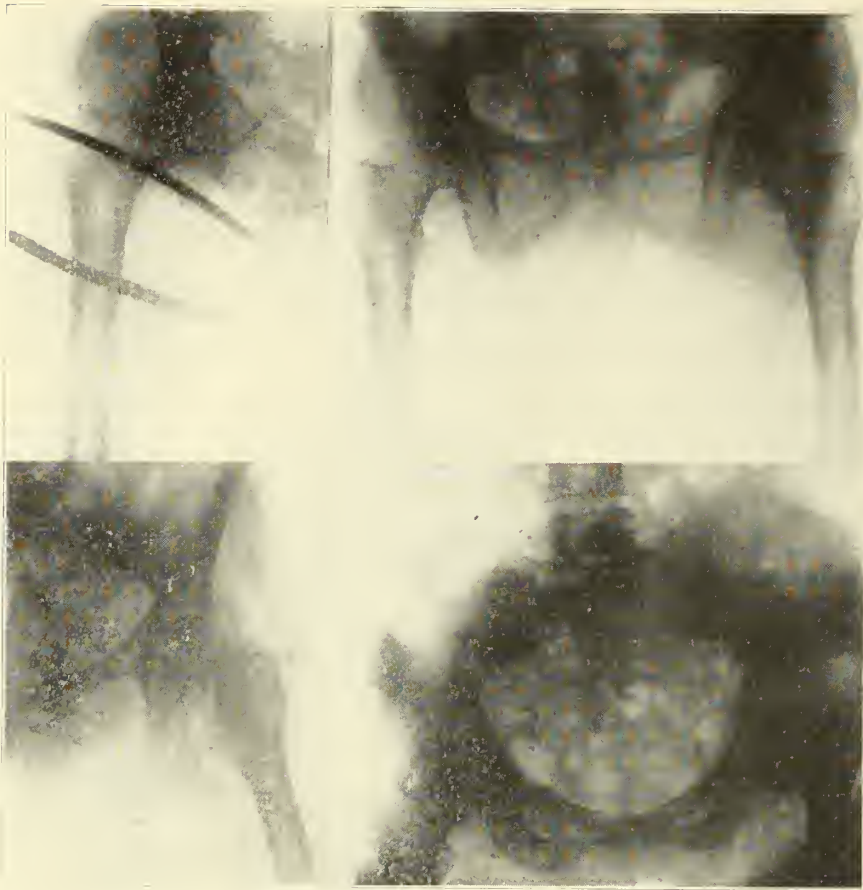
Criticism along the same lines must be made of the Whitman abduction spica in fractures of the hip. In spite of the dogmatic attitude of its distinguished originator, and his scorn for the imbecility of anyone who dares to criticize his method, the fact remains that the long spica in abduction is difficult to apply unless the surgeon is familiar with the use of plaster of Paris, is exceedingly uncomfortable, and is prone to leave behind it a stiff knee. Soiling of the cast by the urine and faecal discharges, and the development of bedsores are very common under ordinary hospital conditions, despite the contempt with which Whitman greets the mention of these possibilities. And the embarrassments which

attend the use of either of these highly efficient methods of treatment—skeleton traction or Whitman spica—increase in proportion to the age, feebleness, and adiposity of the patient. Another consideration in connection with the use of the Whitman spica in aged and feeble patients during the torrid summer months in this climate is that under the oppression of the heavy plaster bandage, extending from axilla to the toes of the injured limb, these old people, particularly women, simply fade away from the heat.

Being in charge of a Fracture Service for white women, in which most of my patients were old, feeble, and the majority of them presenting fractures of the hip, and facing a summer which has not been exceeded for its high temperature for many years, it seemed to me that if a simple way of dealing with these cases, which involved no wound of the soft parts, no callipers or pin through the bone, no complicated system of weights and pulleys, no trussing of the patient in an extensive plaster of Paris thermophore, and which was so easy to apply that even a man without experience could use it with little danger of going wrong: I say that, if such a method



Case 1—Inter-Trochanteric Fracture (a) on admission 8-22-1924, (b) 9-27-1924, (c) Final result Feb. 1925



Case 2—Intra-Capsular Fracture (a) just after admission, 11-4-1924, (b) Eleven days later, 11-15-1924, (c) 12-20-1924, (d) Final and unsatisfactory result, Feb. 1925.

could be found and could be shown to give good results, something worth while would be realized.

An article by R. Hamilton Russell, of Melbourne, Australia, in the *British Journal of Surgery* for January, 1924, on the treatment of fracture of the femur, appealed to me as a model from the point of view of lucidity, excellent English, and calm confidence in the results of an extended experience. The method proposed is simple and can be applied by any man of ordinary intelligence. The exposition of the method is seductive to the mind, and appealing to the ear of the reader. I propose to quote at some length the words of the writer. He says:

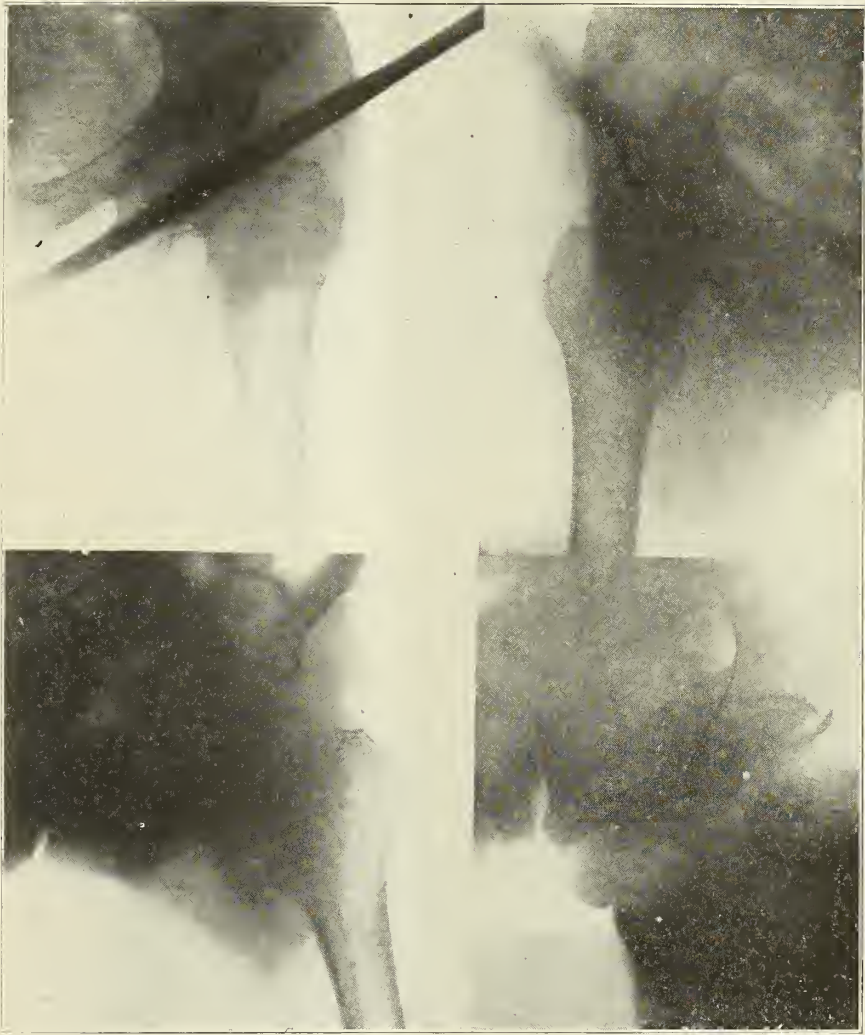
"In the case of a fractured femur, how will the surgeon manipulate the limb to draw out the thigh muscles, and reduce the fracture? He will do it in the following way: Standing by the side of the bed he passes his left hand under the knee; the right hand grasps the leg just above the ankle. Now he gradually exerts a little power, the right hand pulling horizontally

towards the foot of the bed, the left hand up towards the ceiling mostly, but with a slightly inclination towards the foot also. The direction of the forces being exerted by the surgeons hands are indicated by the arrows in the picture.

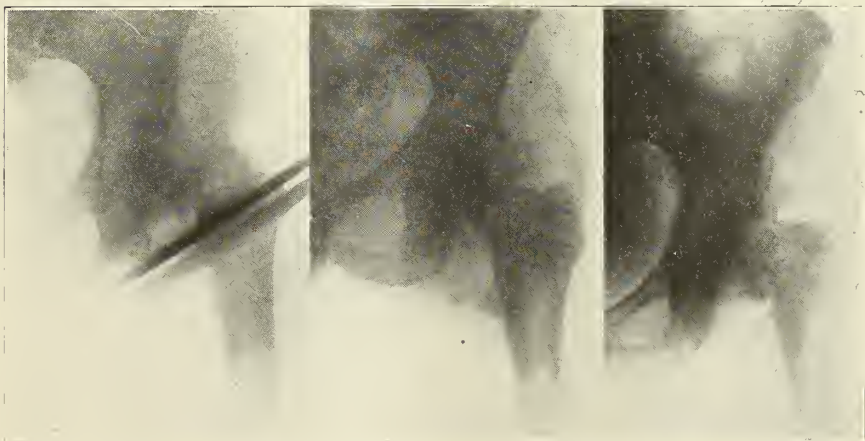
The limb will not come out to its proper length all at once, but the patient will feel more comfortable, and will instinctively know that his limb is being skillfully and properly handled."

"The surgeon now reasons thus: I am sure that this is the proper way to get the limb out to its proper length if only the thigh muscles are quiescent; but they are not, owing to the patient's apprehension and fever. Were I able to stand here doing this for a few hours, or until he sleeps, then there would be no difficulty but obviously this is impossible. I must then devise some means of doing what I am now doing; something that will not tire, that will make the limb absolutely comfortable, and in that way favor the return of mental quietude.

"The apparatus: The arrangement



Case 3—Intra-Capsular Fracture (a) admission 12-12-1924, (b) 12-19-1924, (c) 1-24-1925  
(d) Showing an actual Coxa Valga



Case 4—Intra-Capsular Fracture (a) On admission 12-13-1924, (b) showing correction of  
deformity, 1-25-1925, c) showing partial relapse, 2-18-1925

shown in Fig. 2 was evolved in the way just described—a sling beneath the knee corresponding to the surgeon's left hand, and horizontal traction on the leg, corresponding to the surgeon's right hand. The arrangement provides that the pull on the leg shall be nominally double the upward lift at the knee, although actually somewhat modified by friction between pulleys and cord. The special apparatus required is as follows:

1. An ordinary overhead head to foot bar that can be shifted laterally as required. This can be fitted to the ordinary four post frame; but a convenient way is to use merely two uprights at head and foot respectively, securely lashed to the bedstead.

2. An arrangement to which may be attached a couple of pulleys beyond the foot of the bed. These pulleys should be in a horizontal line with the foot of the patient when the leg is lying horizontally on a pillow with the heel just clear of the bed. A convenient wooden or iron bracket can

easily be made by the carpenter or splint maker.

3. Four pulleys, and suitable cord."

"Application of the apparatus: An anæsthetic is not necessary.

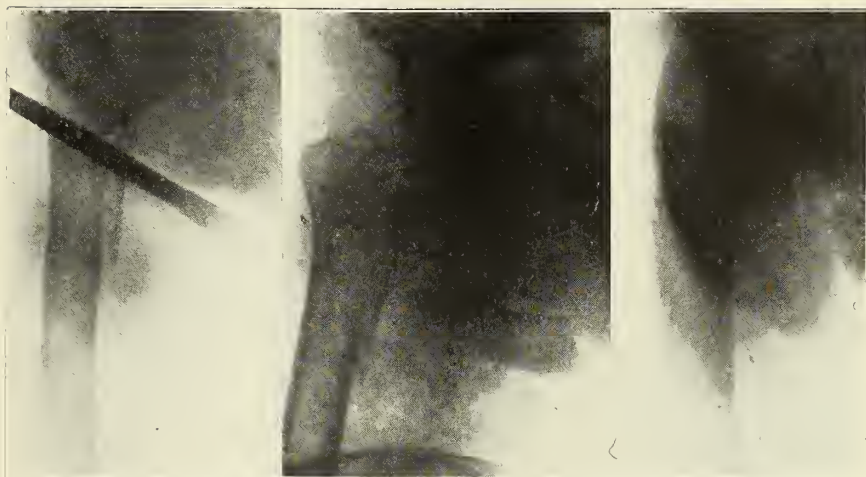
1. The leg having been prepared in the ordinary way is fitted with traction straps and a spreader or stirrup close to the sole of the foot by a method similar to that used in Buck's Extension, but with two important differences: (a) The strapping is not carried above the knee; (b) The spreader is provided with a pulley.

2. The placing of the pulleys: First, pulley A is tied to the overhead bar in such a position that a vertical dropped from it shall meet the leg well below the knee. Pulleys B and C are to be attached to the bar below the foot of the bed; pulley C is that attached to the spreader.

3. The knee sling is now passed beneath the knee, which has all this time been lying comfortably on a pillow. The sling should be broad and soft, a rough towel suitably folded answers well. The ends of



Case 5—Intra-Capsular Fracture (a) on admission 12-22-1924, (b) 1-24-1925, (c) 2-19-1925, after removal of traction



Case 6—Inter-Trochanteric Fracture (a) 10-24-1924; on admission, (b) 11-22-1924, (c) 12-20-1924

the sling are now securely tied together with the cord, which is then passed through the pulleys in the following order: (a) Up to pulley A; (b) To pulley B beyond the bed; (c) To pulley C on the spreader; (d) to pulley D (companion to B).

4. The surgeon now stands at the foot of the bed and slowly tightens up everything, and then the weight is attached. He next takes a soft pillow and adjusts it comfortably beneath the thigh to prevent gravitational sagging at the seat of the fracture. Care must be taken that the pillow is really soft; a common fault is to have too hard and tightly stuffed a pillow for this purpose. Next he looks to the heel; it must not be touching the bed, and he arranges another soft pillow beneath the leg and Tendo Achilles to prevent it from doing so. And now the patient will be absolutely comfortable, and rest of both mind and body (including the thigh muscles) will come to him. Finally careful measurements are taken from the lower extremity of the anterior superior iliac spine to the upper margin of the patella on either side. Quite possibly, especially if the manipulations have been leisurely and quiet, the length will already be nearly normal."

"Our teaching may be stated thus:

1. In a limb previously normal that is rendered perfectly comfortable in a natural position, muscular action is never the cause of displacement of fragments.

2. The causes of malposition of fragments are three in number, viz: (a) Unnatural position and discomfort; (b) Action of gravity; (c) Splints. To recapitulate; in fracture of the femur, given a

method of pulling out the thigh muscles to their normal length by an appliance that is perfectly comfortable, nothing will then remain to be done except to counteract the effect of gravity at the seat of fracture."

"We ought to disregard the proximal fragment altogether, and place the limb in a position which we know to be natural and comfortable, with the assurance that the position which is natural and comfortable for the entire limb will be equally so for the proximal fragment in common with the rest, and that such position will be that which it will assume.

"Muscles are the creatures of habit and the slaves of custom. In a broken limb, every muscle and muscle fibre will cooperate in the endeavor to preserve the position to which it has always been habituated, and the last thing a muscle will do will be to abuse its liberty by displacing a fragment into an unnatural and unaccustomed position. Hence the remarkable circumstance that with our methods faulty alignment (other than that induced by gravity) is practically never seen, although great liberty is permitted.

"It follows, moreover, that whether the fracture is in the middle, the upper, or the lower third, the treatment is exactly the same; the position of the limb and the mode of extension is equally appropriate in all three cases.

"It has become very clear to us that the general behavior of fractures treated in this way contrasts favorably with that usually seen where more 'restrictive' methods are employed. I can only explain it by suggesting that all the tissues of the limb notably the muscles and bones, preserve their nutrition better when laid upon a pillow

with considerable freedom of motion, than when subjected to the compression associated with splints and bandages. I think that union takes place more rapidly than of old, and the patient is certainly up on crutches earlier and the crutches are discarded sooner. Among other things I have been struck with the remarkable rapidity with which consolidation takes place, so that the fracture will pass from almost no union to firm union in the course of a week.

"Newly born and very young children are treated in this way at the Children's Hospital. When two years ago I first saw a tiny infant lying in a cot rigged up with liliputian pulleys and string, and was

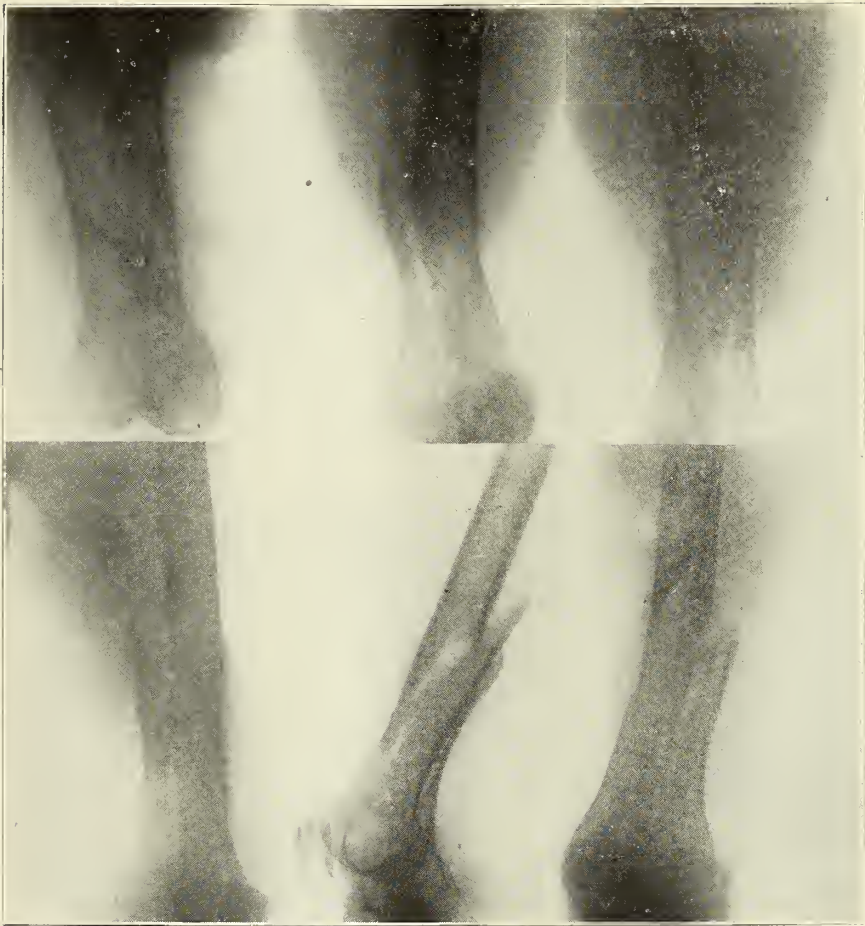
amused thereat, the Sister was so emphatic and serious in her approval that all doubt was at once banished, and no other method has since been even thought of. The nurses find that such patients give no trouble, and are tended and washed with the utmost ease and comfort.

"One more word as to the significance of comfort. Comfort is the first essential in the treatment of a fracture. No apparatus that is not perfectly comfortable can be a good apparatus, for the muscles will never be at rest, but will be always striving to achieve a position of greater comfort. Moreover, there is, I am convinced, a direct relation between comfort and rapid union,



Case 7—Fracture Middle 3rd left femur (a) A-P view, 11-21-1924, just after admission. (b) Lat. view, 11-21-1924, just after admission (c) and (d) A-P. Lat. view, 12-13-1924.





Case 8—Fracture Lower 3rd Femur (a) 12-30-1924, (b) 1-7-1925, (c) and (d) 1-24-1925  
(e and f) 2-7-1925

and an equally direct relationship between discomfort and delayed union, feeble union, and non-union. Explain this as we may, I have no doubt whatever about the clinical fact as a matter of bedside observation. Therefore let us never be content with any means, no matter how ingenious and complicated, and satisfying to our theoretical preconceptions, that is not perfectly comfortable."

Of the claims made in these extended quotations, gentlemen, it may be said "These be whirling words," and the only way to settle the question of their truth is to submit them to the test in the crucible of our own experience. I therefore determined to try out the method upon the cases presenting themselves for treatment in my fracture service. I have made no selection of cases. With the exception of three cases of fracture of the neck of the femur, whose physical condition, comparatively slender physique, and age, seemed to me particularly suitable for the Whitman spica, and which I thought might be used as

a check upon the new method, every fracture of the femur admitted to my ward has been treated by this "Quadruple pulley traction," and is reported in this preliminary record. Most of them are still under treatment, or are too recent for the final functional result to be known. Whether, or how well, they are going to walk I do not know. All I can do is to submit the skiagraphic records, which seem to show satisfactory position of the fragments, and supplement this by stating that stiffness of the knee has not been troublesome; that union appears to have been solid and rapid; and that considering the circumstances, these old women have been throughout the treatment remarkably comfortable. Since the application of the method to the first case on August 24, 1924, until today (Jan. 26, 1925), there has been but one death, and this occurred in the case of an old woman over 80, who from the beginning made no effort to control her bowel or bladder, who was very deaf, and exhibited always a marked hebetude. She was final-

ly carried off by a hypostatic pneumonia after the traction had been removed. I shudder to think what would have been the task of her nurses in dealing with the foul mess of urine and faeces if I had attempted to treat her with a Thomas splint.

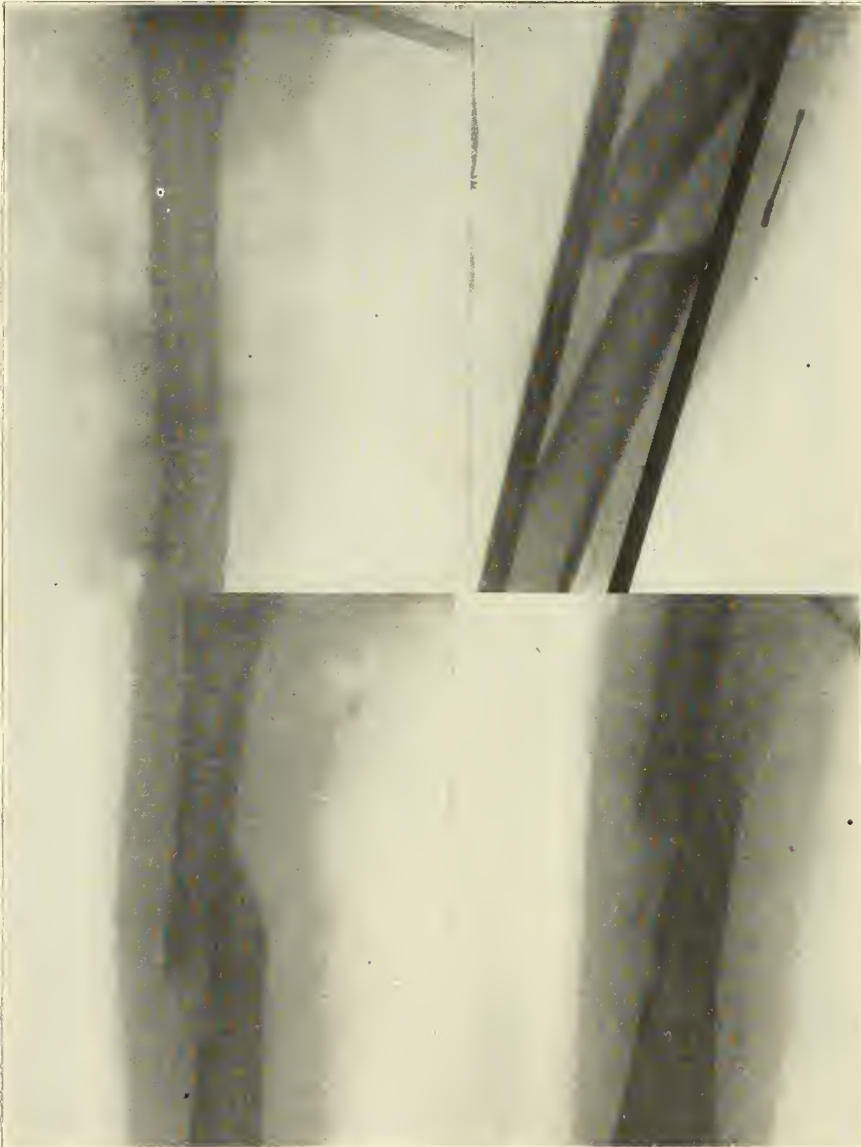
Let me now throw upon the screen the skiagraphs illustrating the effect of this method upon the position of the bones. But before doing so let me state that the maximum weight used in any of these cases was eight pounds, and in most of them not more than six. The illustrations are supplemented by brief records of the cases so far treated.

Finally I wish to say that I realize that

nine cases as recent as mine cannot be held to justify a definite conclusion as to the true value of this method, but it has been my hope that by thus calling attention to it, others engaged in this work might be induced to test it, and that in this way a sufficient number of results might be accumulated to warrant a verdict.

CASE 1.

Katherine K—, age 77 years. Admitted August 19, 1924. Diagnosis; Inter-trochanteric fracture, right femur. Lantern Slide No. 1, taken 8-22-24, before reduction. Lantern Slide No. 2, taken 9-27-24. Quadruple pulley traction put on 8-24-24. Removed 11-8-24. Patient able to walk, and has no pain. The result appears very satisfactory. Patient discharged with solid union on Dec. 9, 1924.



Case 9—Fracture Middle 3rd Femur. (a) 7-15-1924 Ant-post view just after admission, (b) 7-15-1924, same, latnal view, (c) catual view, (c) 8-23-1924—lateral view.



Case 10—Intra-capsular Fracture, treated with Whitman Spica, (a) taken 10-29-1924, (b) 11-6-1924, (c) Final result, 1-24-1925

#### CASE 2.

Mrs. Mary S—, age 75. Admitted Nov. 4, 1924. Diagnosis: Intra-capsular fracture left hip. Thomas splint which was applied in accident room had to be removed on Nov. 7th, owing to pain and threatened pressure sore. Lantern slide taken Nov. 4th (No. 3) just after admission. Quadruple pulley traction applied on Nov. 7, 1924. Lantern slide taken 11-15-24, showing reduction. (No. 4). Lantern slide No. 5, taken 12-20-24, showing condition 46 days after injury. Patient discharged Jan. 2, 1925. Is not yet walking.

#### CASE 3.

Mrs. Octovia G—, age—. Admitted Dec. 12, 1924. Diagnosis: Intracapsular fracture left hip, received 3 weeks before admission, during which time she had no treatment. Lantern slide No. 6, taken just after admission. Quadruple

pulley traction begun on Dec. 15th. Lantern slide No. 7, taken Dec. 19th, showing effect of traction skiagraph taken Jan. 24, 1925. Still under treatment.

#### CASE 4.

Mrs. Angelica L—, age—. Admitted Dec. 12, 1924. Diagnosis: Intracapsular fracture left hip. Lantern slide taken Dec. 13th, in Thomas splint (No. 8). Quadruple pulley traction applied Dec. 14th. Lantern slide No. 9, taken Dec. 20th, showing effect of traction. Skiagraph No. 40646-A, taken Jan. 24, 1925. Patient still under treatment 45 days after accident.

#### CASE 5.

Mrs. Kate R—, age 64 years. Admitted Dec. —, 1924. Diagnosis: Intracapsular fracture right hip. Skiagraphs No. 39532-A, taken Dec. 22, 1924. Quadruple pulley traction applied.

Skiagraph No. 40649-A, taken Jan. 24, 1925. Still under treatment.

CASE 6.

Elizabeth C—, age 80 years. Admitted Oct. 23, 1924. Diagnosis: Inter-trochanteric fracture right femur. Thomas splint replaced by Buck's extension. This was inefficient as the weights were resting on the floor much of the time. Patient had no control of bowel or bladder. Very deaf, and stupid. Very hopeless case. Lantern slide No. 10 taken Oct. 24th. Quadruple pulley traction applied Nov. 15th. Removed Jan. 2, 1925. Lantern slide No. 11, taken Nov. 22nd. No. 12, taken Dec. 20th. Patient died Jan. 13, 1925 of hypostatic pneumonia.

CASE 7.

Mrs. Frank B—, age 42 years. Admitted Nov. 20, 1924. Diagnosis: Fracture middle 3rd left femur. Lantern slide No. 13 taken Nov. 21st. No. 14 same date. Lantern slides Nos. 15 and 16 taken Dec. 13th. Discharged Dec. 26th, with solid union.

CASE 8.

Mrs. Lena R—, aged 69 years. Admitted Dec. 26, 1924. Sent to ward with diagnosis of Pott's fracture in a gutter splint going well above the knee. Fracture of femur detected and confirmed by skiagraph. Skiagraphs taken Dec. 30th,

CASE 9.

Herbert H—, aged 12 years. Was struck by a wagon on about June 17, 1924. Taken to Charity Hospital, and Thomas splint applied for fracture middle 3rd left femur. After a few days Z.-O. produced excretion and had to be

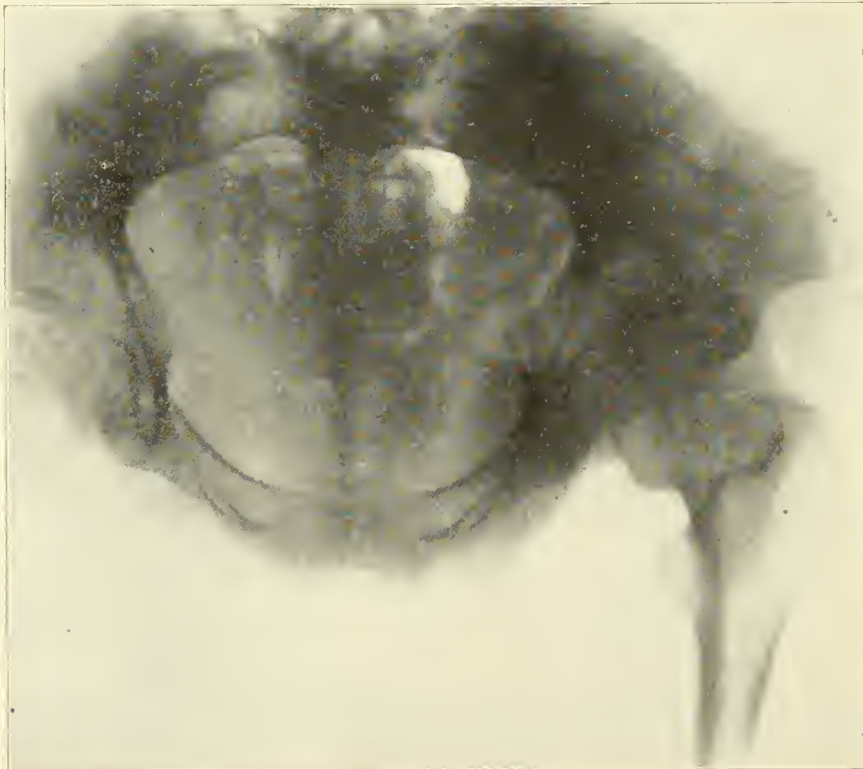
removed. He lay with limb simply supported by Thomas splint, but without traction, till July 30th, when he was taken to his home. Quadruple pulley traction applied by me on Aug. 1st. Skiagraphs taken at Hospital. Aug. 23rd traction removed. Union was firm. Short spica applied Aug. 23rd. Skiagraph just before case was put on, Aug. 23rd. Spica removed Nov. 5, 1924. Solid union.

CASE 10.

Miss Regina T—, age 48 years. Admitted Oct. 28, 1924. Intra-capsular fracture right hip. No. 5th Whitman spica under general anesthesia. Nov. 20th window to relieve pressure over patella. Jan. 3, 1925, spica removed. Knee stiff. Manipulation under ether Jan. 13th. Physiotherapy ordered. Lantern slide No. 17 Oct. 29th, 1924. Skiagraph Oct. 29th. Skiagraph through spica taken about Nov. 6th. Skiagraph taken Jan. 24, 1925.

CASE 11.

Viola B—, aged 32 years. Admitted Oct. 19, 1924. Fell from a chair on Oct. 5th. and was unable to use her right limb. Examined at Hospital, and no fracture detected. Sent back by her physician for re-examination on Oct. 19th. when an intra-capsular fracture of right hip was diagnosed. Thomas splint was replaced by a Whitman spica on Oct. 29th. (Dr. Battalora). This broke across the groin, and was replaced by me about the middle of November. Spica removed, and manipulation to relieve stiffness of knee on Jan. 13, 1925. Still under observation, and getting physiotherapy. Lantern slide No. 18 taken Oct. 25, 1924, and No. 19 taken Dec. 27, 1924. Skiagraph.



Cass 11—Intra-Capsular Fracture. Final result of treatment by Whitman Spica—good union.



Case 12—Intra-capsular fracture Whitman Spica applied Nov. 22, 1924; Quadruple Pulley Tractor, Dec. 26, 1924, on account of Bedsore on Back. (a) on admission, 11-20-1924; (b) 1-24-1925

#### CASE 12.

Miss Agnes O—, aged 74 years. Admitted Nov. 20, 1924. Diagnosis: Intra-capsular fracture right hip. Whitman spica Nov. 22nd. Very thin with senile kyphosis. Pressure sore on back. Spica removed on Dec. 15th. Buck's extension applied Dec. 26th. Quadruple pulley traction substituted. Still under treatment. Skiagraph taken Nov. 20th and Jan. 24, 1925. Still under treatment, eight and a half weeks from injury.

#### DISCUSSION

Dr. I. Cohn: It is very gratifying indeed to have heard Dr. Fenner's paper, as it seems to show us that there is a definite trend towards a simpler method by which any one with mediocre ability and very little at his command can do as well in a small place as a man in a well organized hospital.

In a recent article which impressed me (*Annals of Surgery*, January, 1925)—Dr. Rixford discussing spiral fractures of the femur makes the statement that while he still uses operative measures in some cases the operator must be sure of his aseptis.

We welcome the simple method as outlined by Dr. Fenner, but with bowed head and reverence think of Whitman who has taught us the underlying principle on which is based the modern treatment of fractures of the femur and, while utilizing the newer way, we should not too rapidly discard his methods.

Dr. Muir Bradburn: The case whose skiagraphs were exhibited by Dr. Fenner came to us about three weeks after injury with callus already present. You can stretch callus but you cannot compress it. We felt justified in letting this patient leave the hospital as there was excellent callus although the fragments were in the position which you see in the skiagraph. This patient, seen by me two years after the accident, had no shortening, no apparent deformity, with 100 per cent flexion of the knee, and no functional disturb-

ance. It is due to Dr. Fenner's enthusiasm and the excellent results which he is obtaining in his service that we have adopted in our service the Australian method of treating certain femur fractures. However, we recognize certain indications and contra-indications. We believe it particularly indicated in the inter-trochanteric and intra-capsular fractures. So far we have not used it in children as the plaster cast has been found a convenient method of treatment. In shaft fractures in young adults at the present time we believe that the skeletal traction is the method of choice. In old people we hesitate to use skeletal traction as old bones do not stand traction with foreign material very well. In Dr. Russell's paper no statistics are given, no skiagraphs are shown of the results of shaft fractures, consequently we are unwilling to adopt this method in this type of fracture in young adults. In certain supra-condyloid fractures it is, I believe, contra-indicated, as is illustrated by a case now under treatment in which the lower fragment is displaced anteriorly. In such a case the sling under the knee would exaggerate the deformity. I am showing these skiagraphs which explain our method in treatment of fractures of the femur.

Case No. 1. Intracapsular fracture in an old man. This is treated by the Australian method and we see that there has been an anatomical reposition.

Case No. 2, is a supra condyloid which is treated in a plaster cast.

Case No. 3, a shaft fracture in a young male adult and in this we have employed skeletal traction with practically anatomical reposition. If we can be shown that such method can be obtained by the Australian method of treatment of shaft fractures we would be only too glad to adopt it.

In addition to the case shown we have under treatment in the service at present two inter-trochanteric fractures which are treated by the Australian method; one intracapsular fracture in

a plaster case, and one other shaft fracture in a young adult which was treated by skeletal traction by means of a Steinmann pin. Although Dr. Russell states that this method is indicated in compound fractures, with the experience in only one case, I have found this decidedly inferior to skeletal traction.

Dr. E. D. Fenner (concluding): Just a word to call your attention again to the fact that this is only a preliminary report, as I have had a little less than four months to make the trial of this method. I do not know whether or not the "whirling words" of Dr. Russell are going to stand the test.

I have been endeavoring to get Dr. Bradburn, and others in charge of a fracture service interested. I have had but three cases of fracture of the shaft of the femur. In two the results have been excellent. In the third, which is a splitting fracture of the lower third, it looks as if the result was going to be very good. We get very few fractures of the shaft in my service, but if Dr. Bradburn and the others who have fracture services will try this in fractures of the shaft in young adults, we will soon find out whether the method is what has been claimed for it.

In conclusion I need hardly say that no one could be more fully aware of the value of Whitman's method in fractures of the neck of the femur, or more appreciative than I am of the debt of gratitude due him for his demonstration of the fact that union need not be despaired of in this region, no matter what the age of the patient.

## AURICULAR FIBRILLATION\*

CHAILLE JAMISON, M.D.

NEW ORLEANS

Mr. Chairman and Gentlemen:

It is my privilege to address you this evening on a subject which has become of widespread interest to the medical profession in recent years. Auricular Fibrillation is of more particular interest to the internist, but, due to its great incidence, it must arrest the attention of the surgeon and the specialist. This cardiac disease is one of the oldest clinical conditions that has been observed and recorded by physicians of the past; it has been known as "delerium cordis," "pulsus deficiens," "pulsus irregularis," "mitral pulse," etc. The credit of separating this type of disordered myocardial function belongs largely to the older Mackenzie, who, in 1902 pointed out the constant association of the "ventricular form of mitral pulse" and complete irregularity of the ventricle. At this time he thought the condition due to complete paralysis of the auricle. The real explanation of this completely irregular heart was first made clear by the studies of Thomas Lewis, using the Electro-cardi-

ogram. I would like to call your attention to the fact, however, that this disease was first observed, diagnosed, and treated in the clinic, and that the laboratory served, and still serves, only a secondary and confirmatory position.

In order that we may understand the irregularities of the heart, and thereby recognize myocarditis, it is necessary to review briefly the modern conception of the physiology of the heart impulse. As a result of the physiological investigation of the last two decades the theory of the neurogenic origin of the heart action has been opposed by the view that the source of the rhythmical contractions is to be found in the heart muscle itself. This is known as "myogenic theory." According to this theory, the stimulus arises, not in a nervous center, but in the muscle cells of the heart and is conveyed to the successive portions of the heart, not by the nerve fibrils, but by the cells of the contractile tissues itself. The muscle cells of the heart possess five properties: stimulus production, stimulus conduction, excitability, contractility and tonicity. At the junction of the superior vena-cava with the right auricle, there is a specialized bundle of cells known as the sino-auricular node or "pace maker," in which the normal stimulus to contraction originates; the contraction passes down the auricles in a wavelike manner, and is transmitted to the ventricles by another specialized collection of cells located between the auricle and ventricle, and known as the auriculo-ventricular node, or the ganglion of Tawara, which, in turn, sends the stimulus to all parts of the ventricles by another specialized collection of neuro-muscular cells passing to all parts of the ventricles and known as the cells of Purkenge. In health this complex mechanism comes into play, developing a full cardiac cycle 72 times each minute; it is what produces and controls the pulse.

If you will consider that through the centuries we doctors have placed our greatest reliance in diagnosis and prognosis on the pulse, you can readily understand that we have unknowingly depended on the marvelous delicacy of this apparatus to respond to any change in the organism and make this change known to us by alterations in the pulse rate. How serious must it be then, when this mechanism itself breaks down. It is my purpose to attempt to outline to you how we may recognize such a break-down and then bring about its repair.

The clinical recognition of Auricular Fi-

\*Read before the Staff of the Mercy Hospital, September, 1924.

brillation depends on the demonstration of a complete irregularity of ventricular contractions, which of course, results in a complete irregularity of the pulse, and usually the diagnosis can be made by palpating the radial pulse alone. Complete irregularity means irregularity as to rhythm, as to force, and as to sequence. A pulse may be very irregular, due to constant repetition of the same irregularity, as in repeated extra-systole or in sinus arrhythmia, and this never occurs in Auricular Fibrillation. The irregularity of the ventricle may be more marked on auscultating at the apex, and the combined procedure of auscultating the heart and feeling the radial pulse is very useful, as it often demonstrates a pulse deficit, many of the ventricular contractions being too weak to lift the semi-lunar valves. In the vast majority of cases the pulse is rapid, though cases with a slow pulse are on record.

The count at the apex is frequently greater than at the pulse; a persistent irregularity of the radial pulse and of the ventricle at the apex, especially with an increased pulse rate means auricular fibrillation. In a patient where mitral stenosis has been known to exist, the development of an irregular pulse nearly always means auricular fibrillation. Where a mitral systolic murmur is present, it persists with a slow rate but disappears with a rapid rate. The presence or absence of aortic murmurs depends upon the strength of individual beats. In mitral stenosis, the short presystolic murmurs, present with regular heart action, disappear with rapid fibrillation, but if the diastolic murmur is long and rough it persists with fibrillation. If the heart rate is slow this murmur may be early diastolic and suggest aortic regurgitation, but a diagnosis of aortic regurgitation in slow auricular fibrillation should not be made from a murmur alone, especially if confined to the region of the apex. The other signs must also be present, as a diastolic murmur at the second cartilage, the water hammer pulse, and increased pulse pressure. Where the pulse appears irregular, but not much above normal, especially if there are no signs of cardiac failure, the reaction of the heart to increase in rate should be studied. Now, the pulse rate may be increased by exercise or by a whiff of amyl-nitrite, and with the increase in rate the irregularity increases in auricular fibrillation, whereas with an irregular pulse due to extra systole or partial heart block, an increase of heart rate steadies the action. This irregularity is

present in about 50% of cases of cardiac failure with dropsy; it also comprises 50% of all irregularities. It can be diagnosed clinically with certainty in 90% of cases, the remaining 10% requiring instrumental or graphic methods.

#### *Mechanism*

Auricular Fibrillation is due to the cessation of the normal rhythmical auricular contraction, which is replaced by delirium of the muscle, because the normal stimulus arising in the sinus node is overshadowed by stimuli which arise at abnormal points, then pursue the so-called circus movements; thus the auriculo-ventricular node is bombarded by many and irregular impulses, which are thence conveyed to the ventricles by the bundle of His and the cells of Purkenge, resulting in the complete irregularity of the ventricular contractions.

#### *Pathology*

There is no specific pathological lesion characteristic of this disease, though the evidence of chronic and acute inflammation of the myocardium is always present.

#### *Prognosis*

In those cases in which auricular fibrillation occurs for the first time and which present no other evidence of cardiac disease, the immediate prognosis is good; the ultimate prognosis will largely depend on the extent of the accompanying myocarditis. In those cases of old myocarditis with dilatation, where the onset of fibrillation is late in the course of the disease, the irregularity is of the gravest significance; where it has been present from the onset of the failure, it may be of good omen, as these are the cases of dilatation which respond the most readily to Digitalis medication. In the cases of recurrent fibrillation, with or without dilatation, those cases not controlled by Quinidine medication give only the gloomiest outlook. Aside from any other pathology, the time at which the normal rhythm is restored, whether by treatment or spontaneously, is always fraught with danger from the sweeping out of emboli from the auricular appendices.

#### *Treatment*

That Quinine and Quinidine can slow the heart was known as early as 1853, but it was not until 1914 that Wenckbach accidentally found that it abolished auricular fibrillation; Frey in 1918, experimenting with the various alkaloids, found Quinidine to be the best. When beginning

treatment it is wise to give a small dose, about 3 gr. and wait a few hours to observe any idiosyncrasy. The drug should then be given in 4 gr. doses every four hours until the irregularity is abolished, or for several days, and it is fruitless to keep it up over five days. Ordinarily, in the successful cases, the desired reaction will occur within 48 hours. This specific remedy should be used in all cases of auricular fibrillation, without idiosyncrasy, whether there is or is not compensation, although brilliant results are far more likely to follow in those cases without broken compensation, the presence or absence of valvular lesions should not deter the medication, and the height of the blood pressure need not be considered. Quinidine acts by slowing the auricle through re-establishing the control of the sinus node, and it can do this because the drug is depressing to the muscle cells of the auricle and breaks up the circus movements by prolonging the refractory period. Sudden death sometimes occurs; this happens just as the normal rate is re-established, and is said to be due to the sweeping out of emboli which have formed in the non-contracting auricle, when its normal contractions have been re-established.

When the first publications concerning this drug warned against using it after, or in conjunction, with Digitalis, this was a mistaken idea or observation, and the two may be used in conjunction or sequence, without hesitation. The most desirable combination of the drugs has not been worked out, and I have seen no observations of its use by the intravenous route.

#### SYNOPSIS OF A LECTURE ON THE CANCER PROBLEM IN FRANCE\*

PROFESSOR G. JEANNENEY

*Surgeon to the Hospitals and Professor Agrégé of the  
Medical Faculty of Bordeaux.*

BORDEAUX, FRANCE

In France, the cancer situation is regarded as a national problem, and the manner in which it is dealt with by the Government is interesting from the administrative as well as the scientific point of view. The struggle against the evil of cancer in France is now directed by the state thru an official organization which was brought into effective existence by the efforts of Senator P. Strauss, Minister of Health and Sanitation, with the co-opera-

tion of Professor Bergonie, the well known radiologic expert, and Dr. Hartmann, President of the "Franco-Anglo-American League against Cancer." Thru this agency the government has established special cancer hospitals in all the large university centers, where the professors and specialists in every department concerned (surgeons, physicians, electrotherapists, radiologists, biologic chemists, etc.), co-operate as members of the staff.

After discussing the sociologic aspect of the problem (the propaganda for the better education of the public and the special instruction of the medical classes), Prof. Jeanneney dwelt in detail upon the organization, administration and construction of a cancer hospital, taking as his model the Cancer Hospital of the University of Bordeaux. In dealing with the therapeutic aspects of the problem, he briefly reviewed the most salient features of the modern treatment of cancer, laying stress upon the surgical treatment as by far the most effective in the vast majority of cases. But surgery has its limitations and unfortunately, in view of the advanced progress of the disease in many of the patients who apply for treatment, must be supplemented or associated with deep X-Ray therapy or radium therapy. This association is particularly effective in cancer of the cervix uteri, when the surgically inoperable patient can be made operable by the preliminary application of radium. In many of the borderline cases, the conjoint application of radium by the open, intra-abdominal (parametrial) application of radium, as advocated by Schwartz and Proust, will often accomplish curative results when either surgery or radium alone would fail. (This method was illustrated by lantern slides.) In addition, surgery is helpful in apparently inoperable cases, by combining radium therapy with the ligation of the nutrient arteries of the region (ligation of both internal iliacs in cancer of the cervix; the external carotids in cancer of the tongue), or by extirpating the tributary lymph nodes, as in cancer of the tongue, coincidentally, or after the arrest of the disease at the primary seat of the invasion by the action of the radium. Surgery is also valuable, with radium, in relieving suffering, controlling hemorrhage and removing septic, offensive masses, and thereby prolonging life in many inoperable forms of cancer of the genital, rectal and other tracts. When mixed infections complicate the course of the disease, autogenous vaccines are often effective in eliminating

\*Address before the Orleans Parish Medical Society,  
October 13, 1924.



these secondary infections, and chemotherapy may also render good service when properly used.

While fully recognizing that cancer still remains a most disappointing and discouraging disease, from the curative point of view, the practitioner and the public must understand that cancer is not necessarily a hopeless disease and is curable when attacked by appropriate methods in its early stages. The chief object of the popular propaganda against cancer is to indoctrinate the public in the recognition of its earliest manifestations, when the cancerous growth is still limited to its primary seat of invasion and when its true nature is in doubt and merely suspected. It is then that the prospect of cure may be held with the greatest certainty.

While the popular propaganda is chiefly useful in diffusing elementary knowledge of the danger signs among the masses, the scientific workers are everywhere bending their best efforts to the discovery of the nature of the disease and to the means of preventing its development or controlling it after it has once appeared. In France, the results accomplished by the scientific researches conducted in the cancer hospitals are published yearly in the transactions of the "Association Française pour l'Etude du Cancer," which is now ably directed by Professor Pierre Delbet. It is only by the co-operation and collaboration of the whole scientific world, in which France is participating with the greatest earnestness and zeal, that the final deliverance of humanity from this pitiless and growing evil can be hoped for.

The lecture was illustrated by a number of lantern slides in which were shown the methods adopted by the French League against cancer in the form of posters, printed circulars, popular lectures and exhibits, intended to instruct the public on the early signs and most insidious manifestations of cancer, and by other warnings which will lead the public to seek medical advice and assistance at the earliest moment.

The slides also illustrated the usual types of cancer hospitals or pavillions attached to the universities in the large cities of France, and he did this by exhibiting the Municipal Cancer Hospital of Bordeaux. The buildings, plans, laboratories, wards and methods of treatment by deep X-Ray and radium therapy were also very interestingly passed in review.

## INGUINAL HERNIA: ESSENTIAL FEATURES IN SURGICAL TREATMENT\*

DR. J. D. RIVES,

NEW ORLEANS.

Any paper on this well-worn subject should be prefaced by an apology or at least a defense of its right to exist. My explanation is a growing discontent with the tremendous over-production of new operations that in a large majority of cases consist of inconsequential modifications of the standard procedures which have no foundation in sound anatomical or mechanical principles. I hope to show that inguinal hernia is a simple thing and that our failures are due to simple causes, well understood but little considered.

Out of the many theories of the cause of hernia, two are fundamental and two others give added light. The peritoneal sac is invariable. Whether or not this sac is preformed or acquired is, from the standpoint of treatment unimportant. Mr. Russel and others have brought forward very convincing evidence that it is always preformed but in last analysis the hypothesis is not susceptible of proof. The second invariable factor is an opening in the transversalis fascia. This well-known factor has been brought forcibly to our attention by Moschowitz who maintains that the normal openings in this membrane through which blood vessels and hollow viscera enter and leave the abdomen are the cause of all abdominal hernias. This work is, I believe, the first fundamental contribution to the literature of hernia since Bassini's and Halstead's epoch-making papers. But again, the controversy as to cause does not concern us. Many writers have called attention to a general deficiency of the supporting structures of the body resulting in hernia. No one doubts that such a condition exists but it is not common and hernias are not invariable features in these individuals. It plays a minor part and is of interest chiefly because it is usually best not to attempt radical cure in such persons at all. Deficient developments of the conjoined muscle and tendon has been widely acclaimed and may be fairly common though certainly not present in a majority of our cases. Furthermore, we are not convinced that it is not a result rather than a cause in the majority of instances for it has seemed to us that comparatively recent

\*Read before the Orleans Parish Medical Society, March 9th, 1925.

hernias seldom show it. However, the great anatomist, Mr. Keith, has supported this hypothesis with a comparative and profound embryological study that excites interest, admiration and despair. I do not believe that the theory is proven but we cannot debate with Mr. Keith. The only defense against him is to ignore him unless you be willing to devote a few years to intensive study of the subject. At any rate, the last two theories do not concern us since, obviously we cannot supply the deficiency in either case.

We have then, two remediable defects—first, a peritoneal sac that can nearly always be completely removed, and second, a hole in the transversalis fascia that can be more or less effectively closed. Aside from these basic procedures it seems worth while to build a buttress behind the repaired defect to lessen strain. I fail to see that anything more than that can be accomplished except by way of preventing the minor casualties such as hydrocele and oedema of the testis. If infection does not spoil our work the results will depend directly on the effectiveness of our technique in carrying out these steps.

How then shall we proceed to cure an inguinal hernia? Infection has long been recognized as a most common cause of failure. Therefore asepsis is a prime consideration. We may disregard the surgeon's hands and the instruments or suture materials as causes of infection. Any reasonably good hospital technique together with our own care in preparation will avoid gross contamination in this manner. The conventional methods of skin preparation destroy most surface bacteria and leave a thin protective layer of impregnated epidermis over the myriads of organisms remaining in the hair follicles, sweat and sebaceous glands. If the surface is kept dry; if it is not rubbed by the surgeon's hands, if sweating does not pour bacteria onto the surface, gross contamination will not occur. If gross contamination is avoided, infection will not take place unless devitalized tissue and blood clot remain in the wound, for small numbers of the comparatively avirulent bacteria found in the skin cannot overcome the resistance of healthy tissues. Therefore, we believe that the skin should be screened by dry towels and not many of them; that all dissection should be done with a sharp knife or scissors if possible; that all bleeding points should be clamped before the tissue is infiltrated with blood; and that as little tis-

sue should be caught in forceps and ligatures as is possible.

The incision may be made to suit individual taste so long as it gives adequate exposure. The external oblique aponeurosis may be divided by any sharp instrument so long as the ilio-hypogastric and ilio-inguinal nerves are spared. We find this most easily accomplished by passing a grooved director through a nick at the level of the internal ring down to the external ring and cutting down the groove with a knife. After this structure is dissected back to expose the conjoined tendon above and shelving edge of Poupart's ligament below, the cremasteric muscle and fascia should be lifted up and opened between forceps. The cord is thus exposed throughout the length of the wound and may be easily picked up with the fingers and freed from its bed. It now has no opaque covering and provided blood is not permitted to diffuse itself into the areolar tissue the sac can be readily identified and dissected free from the cord. During this step the vas deferens must be kept constantly in view and if sharp dissection is to be used the tissues must be held steadily tenses by an assistant.

Since Champonniere first advocated high ligation of the sac it has seen a varied career. It has been twisted and transplanted laterally; it has been transfixated, ligated and left in the canal; it has been ligated and excised; it has been ligated, excised and the stump transplanted under the conjoined muscles; and lastly it has been split into strips and plaited like a watch fob. In spite of this man-handling, Champonniere's principle has stood fast as the most important step in hernioplasty. Ninety per cent cures or better have been attained by all methods that secure high obliteration of the sac regardless of other divergences in method. No method has shown better results than transfixation, ligation and excision. Certainly no other is so simple. If the ligation is sufficiently high the elasticity of the peritoneum promptly obliterates the dimple and the free movement of the peritoneum under the transversalis fascia provides a shifting target that makes its reformation difficult. We believe that transplantation of the stump under the conjoined muscle invites recurrence by preventing obliteration of the dimple which guides the abdominal viscera to the weakened area and forms of them; a wedge to dilate the enlarged opening in the transversalis fascia (the internal abdominal ring). Sliding hernias cannot be handled in this way but will not be

considered here. Direct hernias cannot be so simply managed. The sac is usually tent-like and may have bladder in its wall. As much as possible should be excised and the opening closed by suture. The fat of the space of Retzius usually heralds the presence of the bladder, but even with the utmost precautions, bladders will no doubt continue to be opened from time to time. There is no effective way of dealing with these sacs and it is significant that most operators report from fifteen to twenty per cent recurrences.

The first essential factor is universally dealt with effectively. The second, the opening in the transversalis fascia is ignored by most surgeons and but half-heartedly attacked by a large proportion of the remainder. Even Moschowitz has made no serious effort to close the opening. Yet it seems obvious that it should be done. This fascia forms a complete envelope for the abdominal cavity though answering to many names derived from various areas covered. It is a thin but very strong, inelastic, dense membrane except where it is required to bear no strain as on the diaphragm. It is the only structure in the abdominal wall that will not relax under pressure, with the exception of the rectus sheath. Hernias never occur through either of these membranes except at normal or traumatic openings. We must admit room for doubt of this statement in the case of direct inguinal hernias since there is no conclusive evidence that a preformed opening is essential at this point. It is none the less true that an opening is always present, not a stretching of the fascia, and that without this opening no hernia ever occurs. Within the last few years this neglected question has been attacked independently by several men. Harrison of Persia splits the stump of the sac and overlaps the flaps to secure closure of the transversalis fascia. This, by his own statement, does not effectively close the peritoneum at the angles and leaves a raw surface inside. In our experience the fascia on the inferior side of the opening is thin and weak so it is doubtful that the closure is very firm. However the method is sound in principle and seems effective. He closes large direct hernias with free fascial grafts, a well established and sound procedure, too seldom employed. Pitzman closes the rent or internal ring by suture of the transversalis fascia and sac to Poupart's ligament. This seems open to the objection that a peritoneal funnel is produced at the weak point and that peri-

toneum is interposed between the two fascial structures making firm union doubtful. LaRoques suture of the opening from within the abdomen is also open to these objections. More recently, Edmund Andrews recommends suture of the transversalis fascia to Poupart's ligament throughout the length of the inguinal canal. We are accustomed to say that the fascia is not strong enough to suture, but if it is dissected free from the posterior surface of the conjoined muscles a strong glistening white layer will be found that is easily approximated to the ligament in most cases. It seems to us that Andrews has gone to unnecessary lengths but it is the best method so far reported and it is hard to see where it can be improved upon except that it would seem that suture only at the opening is sufficient. It remains to see whether or not results will justify the procedure. We have been attempting closure of the rent by suture for about three years but must confess that until Andrews' article appeared it had not occur to us to dissect the fascia free and in our worst cases we were unable to get a membrane sufficiently strong to be of any value. Since that time we have not failed although two were large recurrent direct hernias. The new floor in these two cases was strong and comforting to the touch.

The hernia is now completely cured. None of its essential features remain. How shall we complete the job? It seems worth while to build a buttress of muscle behind our suture line and since the conjoined muscles are ready to hand we use them after the method of Bassini. This has the additional value of relaxing tension on the transversalis fascia. We prefer to place the cord superficial to this suture line for the reason that it permits suture all the way down to the pubis without the necessity of leaving an opening at the lowermost point where most of the recurrences we see appear. We are aware that Seelig has shown experimentally that muscle will not unite to fascia and that Gallie has perfected a method with autogenous fascial sutures that overcomes this objection. However in the only three recurrent hernias we have seen since the appearance of these contributions, the muscle was still firmly adherent to the ligament and had to be cut away with a knife. In spite of this fact, large hernias had developed and the conjoined muscles were spread out over the sacs as limp and as ineffective as the cremaster. From this we conclude that the muscle is of no value at all unless the sac

is ligated high and the fascial defect repaired. It serves only as a buttress behind the effective repair and if this be the case elaborate and technically difficult method of suturing it are hardly worth while. The same may be said of the many methods of utilizing rectus sheath, overlap of the external oblique aponeurosis, etc. These are much like repairing the roof of a house to keep rats out of the cellar. Hernias occur under them not through them and no amount of overlapping can keep the external oblique tense when a man leans over and shortens the distance between the origin and insertion. If the muscle contracts, tension will be maintained whether there is an overlap or not. If this be undertaken to strengthen a weak aponeurosis there is better ground for the procedure but it is quite exceptional to find a defective structure and even when we do the hernia never comes through it (Coley).

Fancy has ranged free in the plastic repair of the inguinal canal and it is a poor surgeon who has not managed to write his name in the record. The spermatic cord has always been an eyesore to surgeons and, depending on their dispositions they have buried it as deep as possible or put off its disposition until in desperation they had to leave it under the skin. Others of more fanciful turn of mind have found new beds for it above the canal, new points of emergence through the conjoined muscle, etc. Halstead always rational, removed the veins to lessen its bulk and prevent distension of the internal ring. This is objectionable only because it results in more or less atrophy of the testis. It seems to interfere with our closure less in the Bassini operation than in any other and that is the only thing we believe worth while to consider in the case of the cord.

We have not time to consider the various methods of utilizing the rectus muscle. Let it suffice to say that the place to patch a leaking inner tube is not on the casing, though sound, sane surgeons such as Downes and Coley advocate the methods. It is our impression that a fascial graft free or pedunculated, applied directly to the defect should be the method of choice when a satisfactory closure cannot be effected by suture.

We close the external oblique aponeurosis by a simple running suture which is continued downward to close the deep fascia of the upper end of the scrotum thus preventing angulation of the cord at this point. With this technique in use there has not been a case of oedema of the testis

or of hydrocele in the service of Dr. Maes in six years.

I have probably wasted a great many words in saying that an inguinal hernia consists of a rent in the transversalis fascia, congenital or acquired, through which protrudes a peritoneal sac, congenital or acquired, containing in its wall or its lumen or both one or more abdominal viscera; and that the operation for its cure should consist of removal of the sac as completely and as simply as possible, with closure of the rent by suture or patch as simply as possible; and that this should be accomplished by art rather than by brute force.

#### DISCUSSION

Dr. E. A. Ficklen: Rather than let this interesting paper go by without discussion, I will take up briefly the treatment of hernia from the Employer's Liability standpoint.

Our courts take the attitude that if a chronic condition, existing at the time of employment, is aggravated by trauma, the employee is covered. If syphilis or old age, diabetes or nephritis, prolong the convalescence from an injury, compensation is paid on the same basis. This decision may be stretched to cover hernias of long duration that finally cause disability by marked increase in size, or by strangulation, during employment. It is therefore necessary to treat many hernias that are obviously of long duration, though there are few workmen who do not trace a rupture to a definite fall or strain.

Flabby musculature is a frequent cause of failure in herniotomies. Infection, and defective closure by operators who have little appreciation of the anatomy of the region, are more or less avoidable. It has been my practice to borrow extensively from the rectus muscle when the conjoined tendon is relaxed or poorly developed, and I believe that this procedure is advisable in many instances.

Sharp dissection of the cord from the sac, with careful hemostasis, and provision against the recurrence of hernia internal to the deep epigastric artery after the ablation of the indirect sac, by the erection of an adequate muscular barrier, will guard against many disappointments.

Although there are definite indications for local anesthesia, my personal feeling is that general anesthesia is better for these cases.

Within the recollection of many of us, hernias were repaired with silver wire and kangaroo tendon sutures, and plaster spicas were applied to immobilize the groin. The tendency has been to depend on clean union rather than powerful suture material, and to use only the simplest means to guard the region of the incision from undue motion.

Dr. J. D. Rivers (concluding): It is impossible to estimate the number of methods that are or have been used in suturing the conjoined muscle and tendon to Pouparts Ligament for no accurate count of the number of men who do or have done surgery is available. No issue of a surgical journal is complete without one, so let us add our own.

We believe that interrupted mattress sutures are best since if one breaks the others still hold.

We insert these by first taking a deep bite in the muscle often including the fascia underneath and then with a needle threaded on each end of the suture we carry these through the shelving edge of Poupart's Ligament from within outward, tying the knots outside the aponeurosis. This method minimizes the chance of injuring the femoral vessels and places the knots outside the canal so that if infection should occur about them, as sometimes happens, it will be a subcutaneous infection only. We have tried to convince ourselves that such sutures including the transversalis fascia will close the defect in this structure but it is manifestly impossible for the fascia to unite with muscle interposed. If the sutures are so introduced as to approximate fascia to fascia they will soon relax due to cutting through the muscle and the fascia will separate before firm union occurs.

Galtie has recently thrown doubt on the ability of undivided fascial structures to unite side to side even when firmly sutured so it behooves us to make a separate accurate suture if we are to expect any results.

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## LUNG ABSCESS\*

ISIDORE COHN, M.D.

*Professor of Clinical Surgery, Tulane Medical School*

NEW ORLEANS.

Abscess of the lung is a border line disease. A vast literature has accumulated in all of the correlated specialties during the past decade.

The internist has contributed his quota to the literature because of his contact with cases which arise following pneumonia and influenza. The Oto-Laryngologist and Bronchoscopist through the increased number of cases which follow operation upon tonsils and other upper respiratory conditions. Their imagination has been fired in an attempt to prevent abscess of the lung by an effort to determine the relationship of the type of anesthetic to this disease. The value of genius combined with imagination has been translated by Jackson into the Bronchoscopic diagnosis and treatment of these cases. The Roentgenologists have contributed more than their share by improved methods of localization which makes surgical procedure safer.

The Association of Thoracic Surgery has added to our knowledge of this subject during the last few years more than any other group.

It is natural that divergent opinions have arisen on many points regarding this disease. There is one outstanding fact that is the need of co-operation for the

purpose of prevention. Not only is it a preventable disease but it is one which completely incapacitates the patient and gives a very great mortality. An effort will be made to correlate in a systematic manner some of the literature which has accumulated.

When confronted with a case of abscess of the lung, one naturally inquires into its etiology, prophylaxis, diagnosis, treatment and complications.

### *Etiology*

The etiological factors are many. Abscess of the lung, like suppuration in other locations is dependent on infection, trauma and interferences with blood supply. Lambert and Miller studied 60 cases. From their observation they concluded that abscess of the lung follows pneumonia or "is secondary to other conditions, such as operations on the upper air passages, aspiration and foreign material, traumatism of the chest or metastases from suppurating foci elsewhere in the body."

"Pneumonia seems to be the most common cause and to it 1/3 of all cases can be attributed." (Meis, 1921.) Tuffier 23% Lenhartz 15%.

Heuer and MacCready studied sixty-two cases of lung abscess.

"Thirty-one followed pneumonia.

Sixteen cases were post-operative, four cases followed tonsillectomy.

Seven cases followed acute abdominal infections, of which four were liver abscesses secondary to acute abdominal infections; one a pelvic peritonitis, and two subphrenic abscess secondary to appendicitis."

Whittemore: "The etiology in the last 100 cases of my own could be definitely established in all but eight and is as follows: In 66 cases there had been an operation on the upper respiratory tract under general anesthesia. Pneumonia was the cause of the abscess in 22 cases."

"The most common sense theory is aspiration of infected material during operation."

"The typical lung abscess usually occurs subsequent to an attack of influenza or pneumonia." (Willy Meyer.)

Lockwood of Toronto in 1923 stated:

"Contrary to textbook dictums, lung abscess is a rare sequel of lobar pneumonia. It is probably more common following bronchopneumonia. Aspiration of foreign bodies accounts for a certain percentage of abscesses. A few follow traumatism. Emboli

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\*Read before the Orleans Parish Medical Society, March 9th, 1925.

†Surgical Department, Touro Infirmary.

from a distant focus such as an infected middle ear or a thrombosed sinus, is a definite cause. A few develop from pulmonary embolus."

"Particularly, I would emphasize the incidence of lung abscess following operation

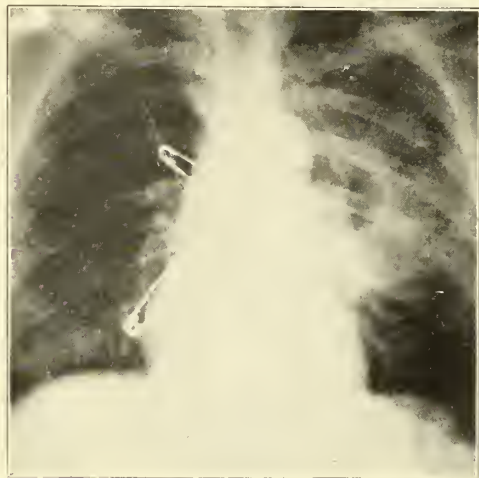


Fig. 1—X-Ray, 50128—Abscess of Left Lung, October 22, 1924

in the region of the nose and throat when a general anesthetic has been employed, it should be pointed out to the profession that lung abscess is not a rare sequel, nor one lightly to be entertained. It should be appreciated that it has occurred almost entirely in patients operated on under general anesthetic."

"Richardson in 1912, first pointed out this phenomenon. Of 208 collected cases of lung abscess following tonsillectomy, we find only seven in which operation was performed under local anesthesia. Twenty-five thousand tonsillectomies have been performed at the Mayo Clinic under local anesthesia, and only one lung abscess has occurred."

"Surely this is irrefutable evidence that the abolition or slowing of the pharyngeal reflex under general anesthesia, by allowing inhalation of infected debris, is the most important factor in the etiology. A fractional percentage of the lung abscesses following tonsillectomy are embolic in origin, but the great majority are due to aspiration of the caseous, bacteria-laden content of the tonsils."

"Admitting and fully realizing, as we must, the danger of tonsillectomy under general anesthesia, and the comparatively rare incidence of this disastrous complication when local anesthesia is employed, in view also of the ease of performing tonsillectomy under local anesthesia with due

respect to our associates practicing otolaryngology, the time is overdue for members of this society to go on record as opposed to the employment of general anesthesia for operations about the nose, throat and buccal cavity, and more particularly for tonsillectomy, when the operation can be as readily and so much more safely performed under local anesthesia."

"Otolaryngologists, the profession generally, and if necessary, the laity should be thoroughly aroused to the danger of lung abscess after tonsillectomy under general anesthesia." (Lockwood.)

Dr. Charles W. Richardson, Washington, (1924): "I believe that very few of these cases are of embolic origin, but that, if not entirely they are a large part due to the aspiration of septic material which is squeezed out of the tonsil at time of the operation."

Hayden of Chicago, Herr of Cleveland, express identical views.

Chipman: "When all facts are taken into consideration, we must conclude that lung abscess is caused both by aspiration and by the infective embolus, carried to the lung by the blood stream or lymphatic system."

Dr. E. I. McKesson, Toledo, Ohio: "There can be no doubt that there is an embolic origin of pulmonary complications. That there is the aspiratory cause of complications is also certain."



Fig. 2—X-Ray 50150 Lateral View October 27, 1924. Prior to Operation

In a symposium on abscess of lung at the New York State Medical Society, 1922, participated in by Willy Meyer (Surgeon), Gwathmey (Anesthetist), W. H. Stewart (Radiologist), Marvin F. Jones (Ent.), Gwathmey remarked "whether local or

general anesthesia is employed, the cause is the same, namely aspiration of the blood infected by the cheesy or milky bacteria laden secretions squeezed out of the tonsils at the operation." All agreed on the above.

Clendening tells us that the most frequent preceding cause is tonsillectomy, next comes a foreign body and then a preceding pneumonia."

"The theory that lung abscesses are embolic in origin is comforting but on what scientific basis does the theory rest? So far as I am aware nobody has attempted more than to state his opinion on the matter. To prove the theory is next to impossible." (Borden)

Cutler and Hunt (1920) in a study of post-operative pulmonary complications at Peter Bent Brigham Hospital, found 3.52% such complications. Pneumonia alone contributed 1.86% complications. Whipple 2.6% pneumonia in 3719 anesthetics. Cutler and Hunt believe that the chief factor in the production of Post-operative pulmonary conditions is embolism.

"The anesthetic is not the chief factor. We are strongly of the opinion that the anesthetic is never the primary and sole cause of the ensuing complication."

Cutler and Hunt collected 41,368 cases from Rochester, Massachusetts General Hospital, Montreal, Leipzig and Presbyterian (New York) and Peter Bent Brigham Hospitals. They found four hundred and sixty post-operative pneumonias collected.

They believe that pre-operative infection and trauma are the factors in the production of emboli which produce post-operative pulmonary complications.

Homans (1922) studied 23 cases at Peter Bent Brigham Hospital. He is of the opinion that the aspiration theory of etiology is not proven nor is it a necessary factor. His conclusions are based on the following facts:

"1. The right primary bronchus is larger than the left and is more directly in line with the trachea so that in the natural process of respiration it gives admission to more floating material, bacteria, etc., both in the conscious and unconscious states."

2. "Lung abscesses from all causes have a strong right side and lower lobe preponderance."

3. "In this series of ten abscesses which follow tonsillectomy or tooth extraction seven were in the right lung and three in the left."

"There were 4 in the upper and middle right lobes 3 in the lower right. On the

left sides 2 were in the upper and 1 in the lower lobe."

"The distribution of these abscesses is even opposed to the aspiration hypothesis, for if aspiration were a factor abscesses which should be found exclusively in the lower lobes are quite common in the upper. Moreover, Moore has discovered no inconsiderable number of abscesses follow throat operations under local anesthesia, where aspiration may as a general rule be disregarded."

From Dr. Jackson's clinic we find such statements as "suppurative disease of the lung frequently results from the aspiration of infected material, hematogenous or lymphogenous infections." (Lukens).

George Heuer summarizes the situation thus:

"Lung abscess follows tonsillectomy and the operation is responsible for the disease."

"The vast proportion of lung abscess follows tonsillectomy done under general anesthetic." "Lung abscess does follow tonsillectomy done under local anesthesia but the proportion is small." Lung abscess due to pneumonia is greatest single factor in his series.

"Viewed from the standpoint of etiology lung abscess is a complication, the elimination of which is largely a problem of preventive medicine and surgery."

With these facts before us summarized:

1. Abscess of lung is largely a preventible disease.

2. It follows pneumonia, influenza and other respiratory diseases.

3. Post-operative lung abscesses follow upper respiratory operations more than abdominal operations.

Prophylactic measures to avoid aspiration or septic emboli must be utilized.

In order to do this intelligently one must consider the anesthetic, since general anesthesia has been so heartily condemned by some.

Comparison of Lockwood's condemnation of general anesthesia with Chipman's statement is worthy of more than passing comment.

#### *Danger of Local Anesthesia*

Chipman: "Local anesthesia per se, especially when cocain is used, is more likely than nitrous oxide-oxygen or ether anesthesia to cause the sudden death of patient during the operation. The committee on the advantages and disadvantages of the various local anesthetics, composed of Mayer, Skillern and Sonnenschein, report twenty immediate deaths from local anesthesia,

two from nose operations, and eighteen from throat operations.

French reports that a girl 12 years, met death in forty seconds from a hypodermic injection of 12 drops of a 4 per cent solution of cocain.



Fig. 3—X-Ray 50214—Abscess of Left Lung prior to operation Oct. 27, 1924

Gibson reports a case of poisoning occurring after two applications of a 2 per cent solution of cocain to the throat and tonsils.

With these facts undisputed, many still assert that local anesthesia is safer than ether or nitrous oxide-oxygen anesthesia. The literature nowhere contains any such number of sudden deaths from ether or nitrous-oxygen anesthesia, during nose and throat operations. A live patient with lung complications following ether anesthesia is better than a dead patient following cocain anesthesia."

Borden: "Local anesthesia in preference to general cannot solve the problem, as it is not practicable in young children who furnish the largest percentage of tonsillectomies."

"A further objection is the inherent danger from the toxic effect of the agent."

That general anesthesia can be made safe is evidenced by the following:

"Crowe (since 1911) reports 3,000 tonsillectomies under general anesthesia without a single abscess of the lung."

Mayo Clinic 16,275 cases during 1909-1919, 10 years without a single known abscess of the lung." (Quotation from Heuer).

Heuer: "These facts demonstrate that tonsillectomy under general anesthesia can be made as safe as by any method. The root of the matter is that it is the surgeon and his method which is very largely responsible for lung abscesses."

Sluder (quoted by Graham and Singer) report 20,000 tonsillectomies under general anesthesia (nitrous oxide) without a single lung abscess.

Dr. Isabella Herb reports 12,045 operation on tonsils at Presbyterian Hospital under general anesthesia. Lung abscess developed in two cases.

Dr. C. W. Richardson (1921) "In the last two years I have done more tonsillectomies under general anesthesia than ever before and have not had one lung abscess following these operations."

The impression obtained from review of these statements and from observation of the methods of operating on tonsils here and elsewhere permit I believe the deduction that the reason few cases of post-operative lung abscess are seen here is that the great part of this work is done by specialists in this field. Careful hemostasis is practiced, and every possible effort is made to avoid aspiration by the use of suction. After all it is not anesthetic but the anestheticist; it is not tonsillectomy but the lack of prophylactic measures.

The possibility of the occurrence of this serious complication should be deterrent to any but the specially qualified throat surgeon from attempting a simple tonsillectomy.

### Diagnosis

According to Clendening "Abscess of the lung is not difficult to recognize provided certain factors are taken into account."

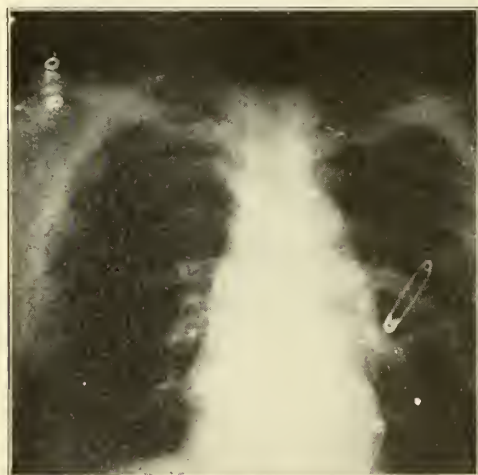


Fig. 4—X-Ray 51702—Three months after operation Jan. 18, 1925

These factors, as stated by him are:

1. Recognition of a preceding possible cause.
2. Predominance of symptoms over signs.



3. Use of X-ray.
4. Use of the Bronchoscope.
5. Sputum examination.
6. Exploratory puncture."

The above formula while true reminds one of the statement of Dr. William J. Mayo, that "it is easier to make a diagnosis from a text than at a bedside.

Because of the relative infrequency of the disease it may be well to recount the classic picture as given by Lockwood.

"When cough, dyspnoea, pain in chest and the raising of foul sputum are added to the disease, or are prolonged after the period that the ordinary affection of the lung or respiratory tract usually persists, abscess should be suspected. Following tonsillectomy, and other operations about the nose and throat, a foul expectoration is usually produced between the tenth and fifteenth days.

Regardless of the cause, loss of appetite, progressive loss of weight, emaciation, general weakness, pallor, productive cough, foul sputum, pain in the chest, fluctuating temperature and leukocytosis characterize the disease. Rigors occur at some stage. Fifty per cent of patients have blood in the sputum at some time during the course of the disease.

It is a disease of symptoms rather than physical signs. The diagnosis depends on the history, the roentgen-ray findings, examination of the sputum and the general physical examination. On an accurate history only the majority of lung abscesses can be diagnosed.

Needling of a pulmonary abscess as a diagnostic method is mentioned only to be condemned."

Almost all authorities agree with the statement of Lewald that "if correctly interpreted the roentgenographic examination is the most reliable means at our disposal in differentiating pathologic conditions of the lung." The lateral projection method as described by Lewald is a great developmental step in diagnosis — the change in the axis of the fluid level greatly simplifies interpretation.

#### *Treatment*

When the diagnosis has been reasonably established the method of treatment to be adopted must be determined.

Treatment may be considered under the following subdivisions:

1. Expectant treatment.
2. Artificial pneumothorax.
3. Bronchosopic.
4. Surgical.

A review of the opinions of those who have treated large series of cases should be instructive.

Lockwood (1925). "Postural drainage, rest in the open air, forced feeding, artificial pneumothorax and bronchoscopy will effect a cure in most patients. Operative procedure should not be delayed. When the patient is no longer improving or holding his own under palliative treatment, operation should be done."

Lambert and Miller (1924). "Originally, we approached the problem as primarily a surgical one. The results were most disheartening. About one year ago we changed radically our procedure by treating these as primarily medical cases, advocating operation only after medical treatment has failed."

Whittemore (1924). "As long as there is a steady gradual improvement, the expectant treatment may be continued, but, if at any time this ceases, or the condition of the patient becomes worse, surgery should be strongly considered. In delaying operation too long it should be remembered there is always the danger of brain abscess, meningitis, septicemia, extension of the process in the lung and fatal hemorrhage.

The results of expectant treatment alone are not encouraging. In 86 cases of my own 11 recovered with this treatment (10 per cent)."

"In Lord's 100 cases seven spontaneously recovered (7 per cent). Lockwood reported 16 recoveries out of 27 cases (51 per cent). Wessler states that in 33 per cent of all cases of acute pulmonary suppuration following tonsillectomy the patients recover spontaneously within two months. Statistics collected by Lenhartz from three municipal hospitals in Berlin, 1905, showed that there was a mortality of from 60 to 100 per cent following expectant treatment.

Lockwood (1924): "The mortality rate in recorded cases has averaged 58 per cent after medical treatment and 25 per cent in those treated surgically.

#### *Result of Expectant Treatment*

Surgeon	No. Cases	
Whittemore	81	10% recovered
Lord	100	7% recovered
Wessler		33% recovered
Lenhartz	Mortality 60 to 100% following expectant treatment.	

(Abscesses following tonsillectomy in two months)

*Result of Surgical Treatment*

Surgeon	No. of Cases	Mortality	Cured	
Tuffier	1897	23	26%	74
Murphy	1898	96	39%	61
Garre	1912	182	18.6%	..
Hedbloom	1910	54	23%	..
Lockwood	1922	27	41%	..
Whittemore	1923	52	15%	..
Graham and Singer		13	46%	..
Lockwood collected	1,117		34.6%	..
Heuer		62	28.8%	..
Lambert	..		33.3%	..

*Pneumothorax*

Pneumothorax is suitable for some cases. Tewksbury reported several cures and Rich has more recently reported eight recoveries out of 10 cases treated.

Lemann and Maes (1914) reported before this society improvement of cases treated by pneumothorax.

Whittemore. "Artificial pneumothorax may be used in conjunction with postural drainage in early cases in which the lung and costal pleura are not firmly adherent. In the cases in which there are strong adhesions I have never seen any evidence pointing toward a permanent cure. The literature for the last 19 years shows an absence of any considerable number of successfully treated cases. The danger of air embolus should be remembered and also, when there are adhesions present the artificial pneumothorax may, in tearing or stretching these, open an abscess that is situated in the periphery of the lung and cause an empyema."

Lockwood: "Artificial pneumothorax should be tried for the small encapsulated abscess not connected with a bronchus, and perhaps for the ordinary longstanding, well localized abscess."

Singer and Graham (1923) "Pneumothorax is done mostly for diagnostic purposes, but in two cases recovery followed."

Bronchoscopic lavage in the hands of the expert has given good results particularly in the class of cases due to foreign bodies and where there is an opening into a large bronchus.

Lambert and Miller: "We are impressed with the fact that this procedure is a very trying ordeal for acutely ill patients, and we are not convinced that it is unattended by a real risk to the patient."

From the Clinic of Dr. Chevalier Jackson reports are made of successful treatment by bronchoscopic drainage and irrigation.

*Surgical Treatment*

The indications for surgical intervention are summarized by Lockwood.

1. "Operation should be undertaken for all patients, who after a thorough trial of medical treatment are no longer improving or holding their own.

2. Early operation is advisable in all cases of fair sized patent cavities surrounded by markedly fibrosed or calcareous walls.

3. If pneumothorax fails to effect a cure in the small encapsulated abscess not connected with a bronchus, operation should be undertaken early.

4. After thorough medical treatment to put the patient in the best possible condition for operation, surgery should be resorted to in all patients in whom an abscess surrounds a foreign body embedded in the parenchyma, or in whom a foreign body lodged in a bronchus cannot be removed through a bronchoscope.

5. Operation is advisable in patients with a very large cavity producing large amount of fluid, in whom the danger of drowning themselves in their own sputum is to be feared."

After deciding upon operation the question of the anesthetic to be used, the mode of approach, simple drainage in one or two stages is a matter of great moment.

Whittemore. "All cases in which the lung and costal pleura are adherent can and should be operated upon under local anesthesia."

"If the lung and costal pleura are not adherent they should be made so before opening the abscess. The correct approach to the abscess having been determined as accurately as possible by means of X-ray and physical examination, under local anesthesia, a window in the chest wall is opened down to the pleura. Sections of one or two ribs should be removed, and the pleura should be carefully inspected. If the lung and pleura are adherent and this exposed region is near the abscess, the pleura will look and feel thickened. It will have a grayish white color, feel firm rather than soft as a normal pleura feels, and the lung will not be seen moving with respiration. If this condition is found the lung may be immediately opened and the abscess cavity found and drained. On the other hand if the lung and pleura are not adherent, the lung will appear and feel normal. Suture or pack should then be done as liver abscess cases and incision of abscess delayed for 24 to 48 hours."

In Lambert and Miller's work we find the following relative to operative procedure.

"The surgical treatment consisted in the

main of incision and drainage in one stage if the pleural cavity was walled off by adhesions. Otherwise, there were two stages. Local anesthesia is certainly safer than general anesthesia even with nitrous oxide gas and oxygen. A soft rubber dam is the best form of drain, and we have abandoned the use of gauze, employing it only to control hemorrhage."

Heuer and MacCready treated 48 cases of lung abscess, of these 36 drainage in one or two stages was the method of treatment.

#### *Anesthesia*

The anesthetic problem in these cases is necessarily a serious one. Local anesthesia is favored by many authorities.

Lockwood, Toronto. "I feel that local anesthesia has a widespread application in thoracic surgery. I do not see why we should take any risk with general anesthesia if the vital capacity of the lung is already lowered."

Whittemore advocates paravertebral anesthesia.

Dr. Willy Meyer cautions against paravertebral anesthesia as follows: "Two deaths have been reported from abroad, and I believe I have lost one case of extrapleural thoracoplasty in consequence of it."

I think that we will do well to follow the advice of these pioneer workers and use local anesthesia in this type of case.

#### *Bronchial Fistula.*

There is one sequel of surgical drainage to which I would like to direct your attention. This troublesome condition is of importance for two reasons. First because in the presence of such a fistula irrigation of the cavity is precluded and second closure, while tempting, is dangerous. As long as there is drainage the fistula acts as a safety valve.

Evarts Graham discussing this subject states: "Bronchial fistulae should not be closed artificially during an acute suppurative process. They frequently act as safety valves for suppuration within the lung; and when their need has ceased they nearly always close spontaneously. Several months should be allowed to elapse before artificial closure of them is attempted."

Col. Keller tells us: "Early in our observations of pleurobronchial fistulae it became apparent that any attempt at closure of these fistulae in a septic field was useless and dangerous. Even in the hands of capable surgeons, closure has been followed by such disastrous complications as lung and brain abscesses. In this connection, it

might be well to mention, and it is probably fortunate too, that there is no absolutely reliable way by which every bronchial fistula can be closed. While the recognized method of purse string suture with inversion will close some, it has been found in our experience that it is far more satisfactory to reduce the size of the bronchial fistula by surgical means such as partial suture and to allow it to close by granulation after stimulation with local application of two per cent alcoholic solution of gentian violet."

Carl Eggers also warns against premature closure of these fistulae. "As long as the fistula acts as a safety valve for intrapulmonary suppuration it must not be interfered with."

#### *Summary*

1. Abscess of the lung frequently follows pneumonia, influenza and operations on the upper respiratory tract.

2. There are two theories of origin—aspiration and embolic.

3. Prophylactic measures should be adopted to avoid as far as possible each type.

4. General anesthesia can be made safe for tonsillectomy.

5. Local anesthesia is not without its dangers.

6. Diagnosis is dependent on careful interpretation of the history, physical examination and X-ray pictures.

7. Lateral projection is of great value.

8. Expectant treatment during the early stages, prior to the formation of adhesions is safe.

9. The results of expectant treatment alone are disappointing.

10. Surgery gives the best results.

11. Local anesthesia is favored for these cases.

12. Bronchial fistulae are common. They should not be closed too soon.

#### *Case History*

L. N., Age 42, white male presented himself for examination Oct. 16, 1924. The following history was obtained:

For the past three weeks he has had a cold, pain in chest and back, headache, dizziness, dyspnoea at night, restlessness and marked weakness. The cough was almost constant.

Physical examination was negative except for dulness in the right scapula region, and coarse rales at the base of both lungs. On admission to Touro his temperature was 100, pulse 110 and respiration about 30.

Blood Count October 16, 1924.

Total whites 13,000, small lymphocytes 23, large lymphocytes 3, Neutrophiles 74. No plasmodia found. No abnormal cells.

GRAPHIC CHART

PATIENT'S NAME *Mr. Louis Nisch*

DATE *10-15-34*

LOCATION *32*

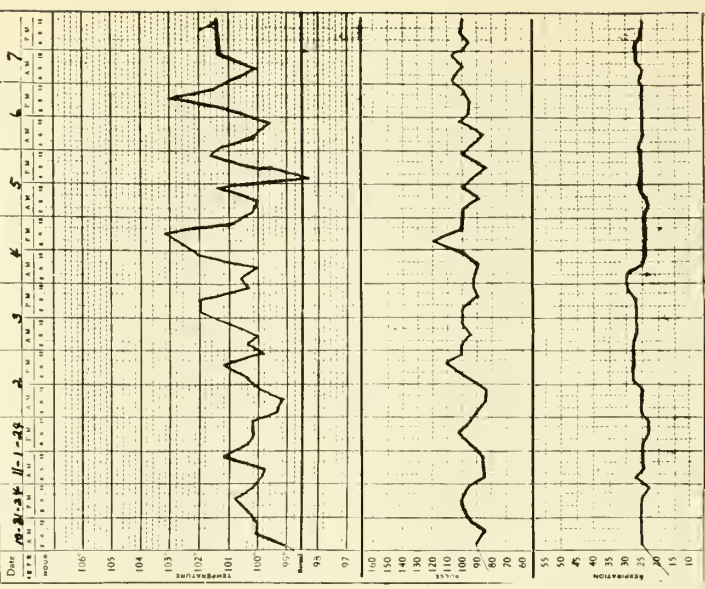
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TIME

TEMPERATURE

RESPIRATION

NEW ORLEANS



GRAPHIC CHART

PATIENT'S NAME *Mr. Louis Nisch*

DATE *10-22-34*

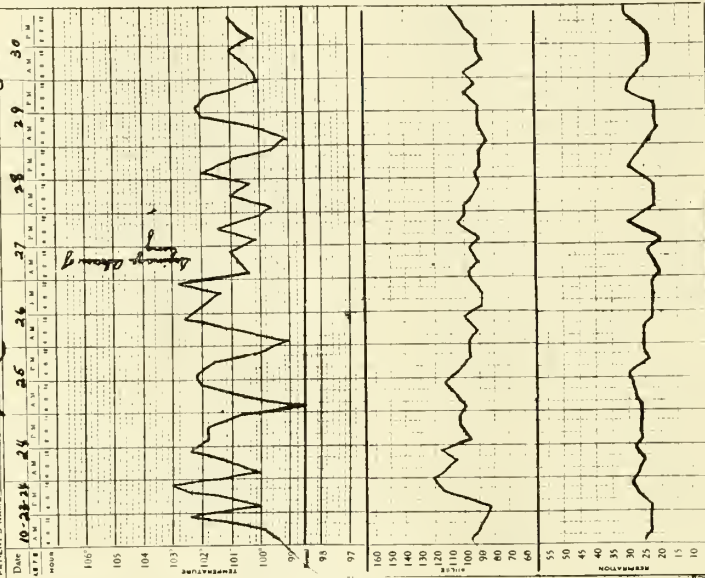
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NO. *5*

TEMPERATURE

RESPIRATION

NEW ORLEANS



GRAPHIC CHART

PATIENT'S NAME *Mr. Louis Nisch*

DATE *10-28-34*

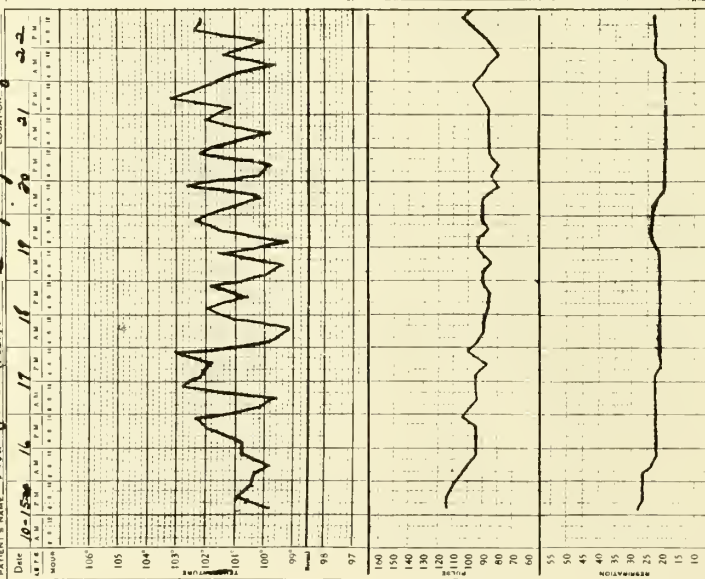
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NO. *6*

TEMPERATURE

RESPIRATION

NEW ORLEANS



GRAPHIC CHART

PATIENT'S NAME *Mr. Louis Nisch*

DATE *10-28-34*

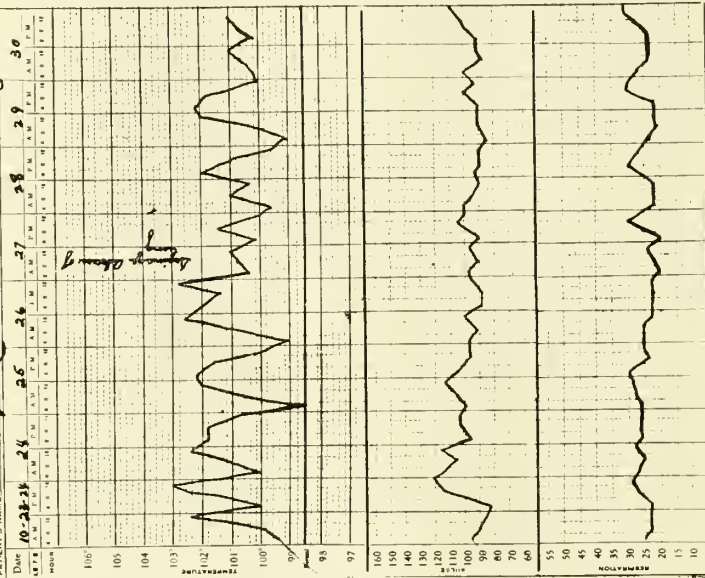
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NO. *7*

TEMPERATURE

RESPIRATION

NEW ORLEANS

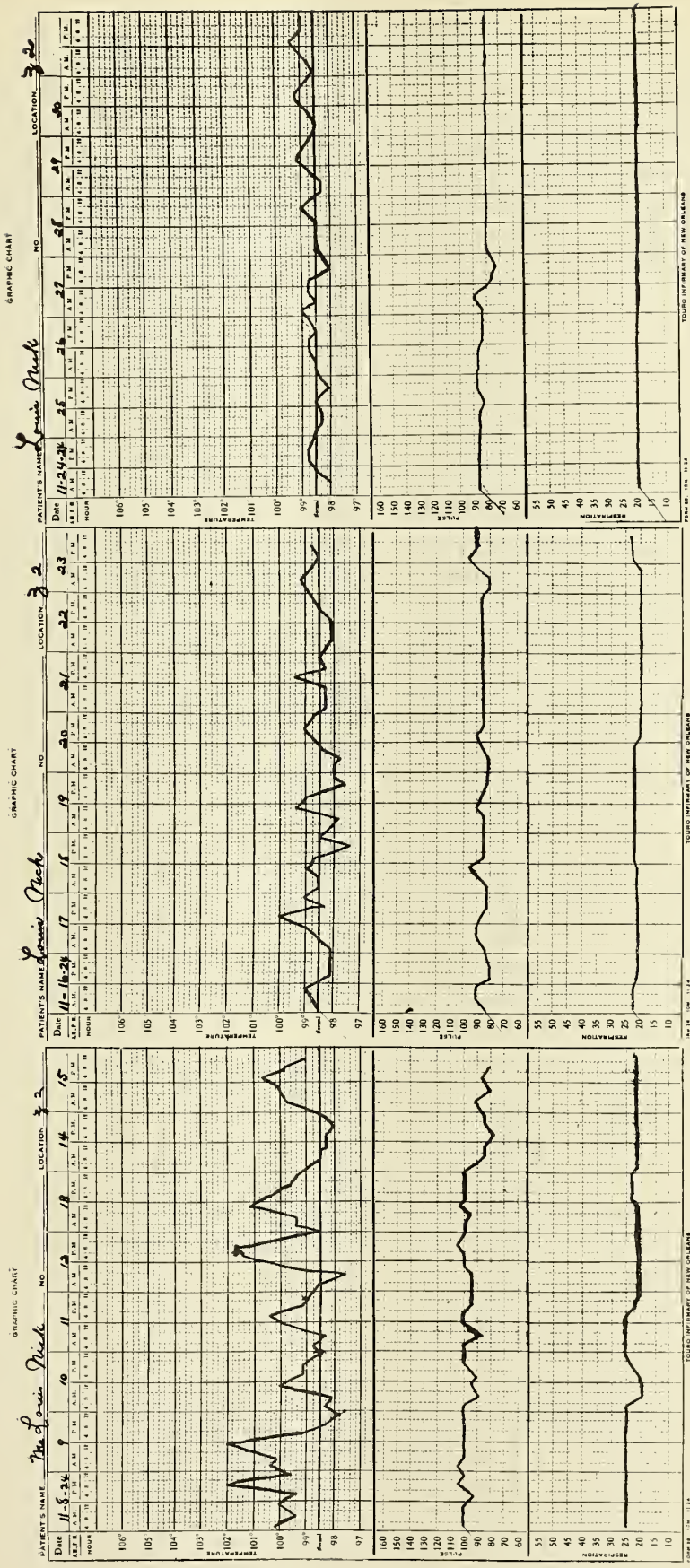


NEW ORLEANS

NEW ORLEANS

NEW ORLEANS

PART I.



PART 2.  
Graphic Chart, Abscess of Left Lung

Examination of sputum, Oct. 16, 1924.

No acid fast bacilli found.

Urine examination, Oct. 16, 1924.

Specific gravity 1018, Reaction Alkaline, Albumin none. Many bacteria and debris.

Believing the case to be acute bronchitis, Dr. Lyons, was asked to take charge of the case. He corroborated our findings.

The temperature continued to vary between 99 and 103.

October 20, a Widal reaction was negative.

Blood count, Oct. 22. Total whites 14,250, Neutrophiles 77, Small lymphocytes 19, Large lymphocytes 4.

Specimen of Sputum. No acid fast bacilli found. Many diplococci. Many short rods, a few streptococci. Blood culture, October 22, negative.

Progress notes.

Dulness in left lung posteriorly near angle of scapula. Broncho-vesicular breathing.

Diagnosis: Bronchopneumonia or lung abscess? (Dr. Lyons).

X-Ray report. Oct. 22, 1924.

"Examination of the chest shows evidence of a large abscess extending from the 5th to the 8th rib, with evidence of a small amount of fluid within the cavity, and air above. There is considerable infiltration surrounding this cavity in the lung tissue.

Progress notes: Oct. 23, 1924.

Dulness posteriorly from about 4th to 8th rib and forward as far as vertebral border of scapula. Mucus rales everywhere in chest.

10-24-24. Area dulness noted on left from 4th to 8th dorsal vertebrae. Area is slightly to the left of median line and extends laterally to posterior axillary line. Over this region there is broncho-vesicular breathing and occasional sub-crepitant rales. Opposite lung shows slightly exaggerated breathing with a few sibilant and sonorous rales. No dulness found in anterior chest or axillary region. Sputum has a disagreeable odor.

10-26-24. Area of dulness has increased, it now extends forward to the post axillary line down as far as the 9th rib. The odor of the sputum is very foul.

X-ray. October 23, 1924.

Examination of the chest shows the abscess in the left lung as previously reported. The localization by the lateral position locates the abscess near the anterior chest wall from about the fifth to the eighth rib.

Operative Record. Oct. 27, 1924.

Pre-Operative Diagnosis: Abscess of Lung.

Surgeon: Isidore Cohn. Local anesthesia.

Intercostal incision about 3 inches long, its middle about the posterior axillary line over the region of the 7th and 8th ribs. Incision carried through the muscle down to the rib. Subperiosteal resection of the 7th and 8th ribs was then proceeded with. Finding the pleura adherent to the lung an incision, was made through the pleura and lung, about  $\frac{1}{2}$  an inch long, a pair of Mayo scissors was used to enlarge the original incision into the cavity. A large quantity of chocolate colored foul smelling material was discharged. The cavity which was multilocular was probably about 3 inches in diameter. Two large soft rubber drains (Penrose) were introduced into the depths. (At Dr. Lyons' suggestion, a needle was introduced prior to making the incision in the lung.)

Laboratory Reports on Pus obtained:

"Smear shows organisms morphologically staphylococci and various other organisms. Culture shows only staphylococcus hemolyticus. Negative for acid fast organisms."

Progress Record: October 27, 1924:

Patient returned from operating room in very good condition and not apparently shocked. Coughing a great deal. Not complaining of much pain. Pulse rapid but good volume. Temperature not as high as previously.

Oct. 28, 1924. Temperature not over 101. Pulse continues good. Still coughing quite a bit. Wound is draining well. Discharge is very foul. Outside dressings were changed and gauze saturated in Compound tincture of Benzoin applied.

10-29-24. Penrose tubes removed. The lung in the depths presented a greenish black color suggesting dead tissue, possible gangrene. The abscess discharged a large quantity of foul smelling pus. Resonance is present now where dullness previously existed. Pulse volume much better. Temperature average is lower.

10-30-24. The extremely foul odor that characterized the abscess before is no longer present.

X-Ray report. 10-30-24. "Examination of the chest shows the abscess cavity in much better condition than previously reported. The infiltration at the lower portion is still present but the lung looks considerably improved above and below the abscess. (Samuel & Bowie).

Progress Notes: Oct. 31, 1924. Dressing changed, small clot found in cavity after removal of mercurochrome pack. The pack has comparatively little odor. Three strips of gauze saturated in balsam and oil packed into cavity.

November 2, 1924. Odor foul as the pack was removed. Some active bleeding occurred. Patient coughed a great deal and the bloody discharge continued until replaced.

November 3, 1924. Pack removed and considerable hemorrhage occurred. The patient coughed and expectorated blood. Bleeding controlled by repacking.

November 7, 1924. X-Ray examination of the chest shows evidence of a resection of the seventh and eighth ribs of the left side, with a marked infiltration throughout the lung on this side. There is some evidence of breaking down of the lung. There is an infiltration on the right side. (Samuel & Bowie).

November 8, 1924. Considerable bleeding occurred when patient began to cough violently during the application of the packs.

November 10, 1924. Some coughing during dressing. Odor is as bad as ever.

November 16, 1924. Examination of right lung shows no dulness, rales nor abnormal respiratory sounds.

November 19, 1924. Cavity smaller, granulating. One large fistula and one very small one. There is less coughing and the coughing is not of the explosive type.

November 21, 1924. Cavity smaller. The base seems to be granulating. The openings into the bronchi seem to be smaller. There is less coughing during dressing.

November 23, 1924. Wound granulating and cavity is smaller. Temperature has been normal for the past 36 hours.

Patient while sitting up in chair had a weak spell. His pulse was good, he became dizzy and pale, saying he felt like he was dying. Cold sweat was present over the entire body. Coughing quite a good deal. Expectored some bloody sputum.

November 29, 1924. The cavity is very much smaller and there is less odor.

December 1, 1924. Wound smaller. No apparent discharge, even when patient coughs.

December 4, 1924. X-Ray report. "Examination of the chest shows evidence of practically complete healing of the abscess on the left. There is still some pleural thickening in this region but the chest is otherwise in good condition. (Samuel & Bowie).

December 5, 1924. Cavity smaller. No odor.

December 27, 1924. Blood pressure 106/60. Pulse 80.

X-Ray report. Jan. 4, 1925. "Examination of the chest shows an enlarged aorta. The lung expands normally on the left side and there is no evidence at this time of an abscess. There is a slight amount of fibrosis around the old abscess." (Samuel & Bowie).

X-Ray report, January 18, 1925. "Examination of the chest shows no evidence of active abscess of the lung at this time. There is a slight fibrosis on the left, but no other evidence of pathology." (Samuel & Bowie).

January 22, 1925. Patient discharged, feeling fine. Bronchial fistula allowed to remain patent. Wound healing. No rales heard in chest. Voice sounds and respiratory sounds normal.

February 18, 1925. A 2% alcoholic solution of gentian violet was applied over the fistulous tract. There is still slight evidence of the fistulous communication between the lung and the outside.

February 23, 1925. Voice sounds are all clear, and no rales heard at any point. No evidence of an inrush of air can be heard on inspiration at the small fistulous opening. Second application of gentian violet was made.

March 5, 1925. Fistulous opening almost closed. There is a small granulating area on the skin. Gentian violet applied. Patient gaining in weight, and all physical signs of an apparently normal lung are found.

April 1. Fistula closed.

I wish to thank Miss Marshall, librarian of the Orleans Parish Medical Society, for preparing the bibliography.

I also wish to thank the Prior Company for valuable photostats, prepared for me.

To the house staff of Touro Infirmary and the nursing staff, I wish to extend thanks.

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## DISCUSSION

Dr. Homer J. Dupuy: It is with a great deal of pride that I can say that we, of New Orleans, are among the first, if not the first, to have applied the suction apparatus in throat surgery. I can recall that before its use I had three or four cases of pulmonary abscess, but none since. Now the prevention:

(a). As soon as the patient is under the anesthetic open the mouth and with the suction remove this enormous amount of secretion in the throat. As you know, the mouth is a harbor for microbes. Therefore, begin the suction as soon as the patient's mouth can be opened and remove these secretions from the throat.

(b). The operation should be performed as quickly as possible.

(c). Suction should be used properly at the base of the tongue, where it is very easy for bacteria to slide down towards the larynx.

By carrying out to perfection the use of the suction apparatus, using it in the beginning of the operation and all through the operation and securing perfect hemostasis by ligature, etc., we can certainly help to further the prevention of abscess following tonsillectomy.

Dr. E. E. Allgeyer: I would like to disagree with the contention made that anesthesia has nothing to do with lung abscess following throat operations. Producing too deep anesthesia is a predisposing cause of lung abscess. The anesthetist not thoroughly experienced has a tendency to produce profound anesthesia in order to abolish all the throat reflexes, thereby prolonging the time of recovery from minutes to hours during which time there is a great change that aspiration of blood and septic material may occur. If in my patients the reflexes do not return in five minutes after anesthesia is discontinued I do not consider that it was properly administered.

Dr. Arthur I. Weil: Whenever there is a discussion as to the cause of pulmonary abscess, it is generally conceded that in the majority of cases it is the result of tonsillectomy or other operations on the upper air passages. Of course, abscess of the lung comes from many causes, but one of the commonest and, strange to say, one that has only been recognized recently is operation on the upper air passages, especially tonsillectomy, with pulmonary abscess as a sequence. Aspiration may be the cause, or embolism, and from studying the literature it seems to me that there are two distinct types of abscess following tonsillectomy in which the course is entirely different, viz:

(a). Type one in which the patient, after tonsillectomy, never seems to get back to normal, runs temperature, has a constant cough, more or less distress in the chest, never convalescing.

(b). Type two in which the patient recovers



normally from the operation, goes home anywhere from six to twelve days after and, as far as tonsillectomy is concerned, is wholly cured. Suddenly he develops chest symptoms which go from bad to worse, with lung abscess formation.

I believe the first type can readily be attributed to aspiration while the second type is doubtless embolic in character.

Now, we do not see very many pulmonary abscesses in this locality. Mt. Sinai in New York reports nine cases following tonsillectomy within a year—at the Touro, Charity, and Ear, Nose & Throat Hospital here, where a very large number of tonsillectomies are done, we do not get anything like that proportion of pulmonary abscesses following operation. I think the reason for that is clear: here we operate upon our cases carefully. That may sound like a presumptuous statement to those who have not gone around the country and witnessed the apparent lack of care in tonsillectomies. It is considered an operation without danger, an operation which is alluded to carelessly by specialists and others and in which the patients are operated and turned over and allowed to bleed. Seeing this, perhaps you would believe that the careful carrying out of tonsillectomy is the chief safeguard against pulmonary abscess.

With regard to analgesia and the proper use of the suction: In tonsillectomy, as we dissect the tonsils and squeeze them out with the snare there is an amount of caseous matter that is bound to get into the throat and if we are not careful will be aspirated in the lung and become the focus of an abscess. Caution in operating, careful administering of the anesthetic, the strict attention with which suction is carried out, all aid in avoiding lung abscess. We can in some cases also avoid embolism, which is very often due to traumatism of the tissue at operation. Where you have a clean cut field of operation and little traumatism you are not apt to get abscess formation from embolism.

As to the treatment, that is a matter for the surgeon to solve. In the course of discussion bronchoscopy has been mentioned as one of the treatments. This has been used by Chevalier Jackson successfully in certain cases. I believe, however that the only type that can be successfully treated by bronchoscopy is pulmonary abscess caused by foreign body. Those abscesses can be reached by that method but it is a question in my mind whether the ordinary lung abscess, especially of the embolic type can be so reached.

Dr. Dan Deal, (Springfield, Illinois). I want to express the opinion, of the men on this trip, that the reputation of the South for hospitality has been fully exemplified during our visit, and while here we have profited very much. I congratulate Dr. Cohn on his paper; it is certainly an extensive study and resume of the literature. One thing which has not been extensive in the literature and which we have used in five cases in which simpler treatment had been considered and finally decided that radical procedure was indicated—we have done five for bronchiectasis, and have had four foreign bodies; by using the surgical procedure of a preliminary pneumothorax, beginning a week before the chest is opened and getting down to atmospheric pressure or a little pus before the operation, then opening the chest widely you do not have the pleural shock, which is a misnomer. In my opinion the so-called pleural

shock is simply the sudden pressure change and you do not have it when the simple procedure of a pneumothorax has been gradually produced.

The last reports which I saw showed a mortality of 50 per cent in lobectomies; if this procedure is used the mortality in lobectomy will be reduced to fifteen per cent. The question may arise as to what happens in these cases after the lobe is removed. It is surprising how high the diaphragm will come up and how high the expansion in the opposite lung after this procedure. We decrease the positive pressure following operation, or at least reduce the chance of fluid forming and also control hemorrhage.

Dr. Isidore Cohn (concluding): I do not believe that Dr. Caine would have made the statement regarding anesthesia having nothing to do with lung abscess if I had read the following quotation from McKesson: "There can be no doubt that there is an embolic origin of pulmonary complications. That there is the aspiratory cause of complications is also certain."

Gwathmey believes the same thing. The anesthetic probably has something to do with it and since everybody cannot operate as fast as the man who operates in twenty seconds, most of you had better use your suction pretty well.

## ANESTHESIA IN OBSTETRICS\*

WALTER E. LEVY, M.D.

NEW ORLEANS.

"Unto the woman He said, I will greatly multiply thy sorrow and thy conception; in sorrow shalt thou bring forth children." Thus spoke the Lord unto Eve after she had eaten of the forbidden fruit. And until comparatively recent years this has been true,—true until the 19th of January, 1847, when Sir James Simpson of Edinburgh first made use of an anesthetic in obstetrics, performing a version under ether anesthesia.

Even in the day of Homer mention was made of the anesthetic effects of nepenthe, and Herodotus refers to the practice of the Scythians, of inhaling the vapors of a certain hemp to produce anesthesia. The virtues of mandragora are alluded to by Dioscorides and Pliny. In China in the third century, Hoatho produced anesthesia. The Talmud is replete with reference. And thus down through the ages, even up to the time of the immortal Morton, but nary a word is said about successfully, relieving the woman, from the original curse placed upon her in the Garden of Eden. In fact, Simpson, himself, said in his text-book: "I further attempted to ascertain if any writer had proposed to assuage or annul, by the same or other means, the pains attendant

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upon human parturition. I failed, however, in finding any traces whatsoever, either of any practical attempts to abrogate or modify, by true anesthetic means, the pains of labor, or of any theoretical suggestions even as to the very possibility of effecting the desired result." Is not the woman in labor entitled to relief? Most certainly, and every modern obstetrician should keep uppermost in his mind the words of Bacon: "I esteem it the office of the physician, not only to restore health, but to mitigate pain and dolors."

It was toward the end of the year of 1846 that Sir James Young Simpson saw Lister operate under ether anesthesia and he was so impressed with its success that he began to use it in midwifery practice. However, he abandoned ether in favor of chloroform, and in March 1847, he read a paper before the Medico-Chirurgical Society of Edinburgh, advocating its use for the relief of pain in obstetrics. Thus to Sir James Simpson we are everlastingly indebted for opening up that field in obstetrics wherein the parturient woman is eased from the nerve-racking pains of childbirth.

It is not the purpose of this paper to go into minute details as regards each obstetrical administration, but rather to discuss briefly and in a practical way the choice and desirability of those anesthetics with which I have had experience. However, in the particular case of the synergistic analgesia of Gwathmey, I shall deal more specifically, inasmuch as it holds out a greater promise in the field of painless childbirth,—much more as regards safety and practicability, than its much vaunted rival, twilight sleep.

#### *Chloroform and Ether*

As mentioned before, both ether and chloroform were introduced into obstetrics by Simpson. Contrary to the practice of Simpson, however, ether today is the more favored of the two.

Chloroform is still used by many obstetricians because of its quick action, its fairly pleasant smell, and the fact that it rarely causes nausea and vomiting. There are several objections to chloroform, namely,—the narrow margin of safety in regard to respiratory paralysis; and the fact that chloroform not seldom leads to a necrosis of the liver, and is thus strongly contraindicated in cases of impending eclampsia or in eclampsia itself.

Ether, on the other hand, while slower in action and often causing more nausea and vomiting, is a far safer anesthetic than

chloroform. I am frank to say, that were I short of assistants in conducting an obstetrical case, and without the synergistic mixture of Gwathmey at hand, I would not hesitate to allow some lay person to administer ether by the open drop method under my direction.

Neither chloroform or ether is desirable in the face of respiratory or renal complications. Chloroform, furthermore, is said by Graham to be transmitted through the placenta and is a predisposing cause of hemorrhagic disease in the newborn.

#### *Morphin-Scopolamin*

Morphin and scopolamin were recommended in 1899 by Schneiderlin for surgical anesthesia, but their first use in obstetrics was by Steinbuechel in 1902. It remained, however, for Kroenig and Gauss of the Freiburg Clinic, to develop and popularize its use. It was in 1907 that the first one thousand cases were reported from the Freiburg Clinic, and in 1913 Gauss and Kroenig reported three thousand cases in a paper read in Chicago. Since then much has been written both in support of and in condemnation of the method.

It would indeed be presumptuous, were I, with an experience of less than one hundred cases, to place myself in the unenviable roll on condemning such authorities as Kroenig and Gauss. But one has to take into consideration the ideal environment, assistance and methods of procedure at the disposal of these men, who concentrated their years of experience upon this one type of analgesia. In a general hospital where no provision is made to avoid interruption, such as noises, incompetent and untrained assistance, etc., one can readily realize the impossibility of surmounting these obstacles, and thereby approaching the ideal in any way. If such is the case in a hospital, what must be the results to be obtained in a home? This is a conclusion reached, not based upon experience alone, but upon common sense and every-day judgement.

Morphine and scopolamine are of value as first stage drugs, and as such are a valuable adjunct to nitrous-oxide and oxygen during the second stage of labor. At present this is the only use that I make of these drugs, and then only in selected cases.

#### *Nitrous Oxide*

It was in 1880 that Klikowitch of Petrograd recommended nitrous oxide and oxygen for obstetrical purposes, using an 80 per cent mixture of oxygen with nitrous oxide. It remained, however for Webster in 1907, and Webster and Lynch in 1913,

to revive and popularize the use of nitrous oxide in obstetrics, particularly for producing analgesia during the second stage.

Among the many advantages claimed for this type of anesthetic are :—The fact that it is under the absolute control of the anesthetist at all times; the duration of labor is perhaps a bit shortened, and the force, frequency and duration of the labor pains are not affected; the ease and rapidity with which the patient is completely relaxed is of great importance, particularly at the completion of the second stage.

Nitrous oxide as an intermittent analgesic can be given with safety over a period of from six to seven hours, thereby giving relief to the average primipara during the entire second and great portion of the first stages. It is our custom to precede the administration of the gas by a preliminary hypodermic of morphine or heroin.

There are practically no dangers connected with nitrous oxide-oxygen analgesia. In addition we never hesitate to employ nitrous oxide in order to do a version, a forceps, or even a cesarean section. True, the baby in such a case may be a bit cyanosed, but by merely increasing the amount of oxygen in the mixture before severing the cord, the infant almost immediately assumes a pink color and begins to cry lustily.

Where the expense, and it is not great, is not a particular item, nitrous oxide-oxygen is without a doubt one of the most satisfactory obstetrical anesthetics that we have. In the hands of an expert it is relatively easy of administration and is very safe as regards both mother and child.

### *Ethylene*

Much that I have said in regard to nitrous oxide-oxygen analgesia and anesthesia applies likewise to ethylene, with perhaps these marked differences: Ethylene is highly explosive, particularly when in mixture with oxygen; ethylene has a rather disagreeable odor, and it is this feature which makes it rather unsatisfactory when given intermittently for analgesia; the relaxation with ethylene is much greater than with nitrous oxide, and if one is not particularly careful, labor may easily be prolonged, thus rendering it unadaptable for self-administration as is nitrous-oxide. The amount of post-partal hemorrhage, is in our experience greatly increased. When ethylene was first introduced in New Orleans, Dr. Ernest Allgeyer and I conducted a fair series of cases under this particular gas, and it was this feature which was especially noticed.

With DeLee, we would say that in view of the above, we would hesitate to give it unqualified endorsement and for the present, at least, incline toward nitrous oxide and oxygen.

### *Synergistic*

Recently there has been brought before the medical profession the synergistic analgesia by the method of Gwathmey. This method is so new and gives so much promise of ultimate success, that I shall go more into detail concerning it. In the words of Gwathmey, "the ideal sought was a state of relaxation and analgesia with consciousness but little if at all impaired, so that full co-operation might be had at all times."

Briefly, as used at present, it consists in giving the patient a preliminary hypodermic of 1-6 of a grain of morphia in 2cc. of a fifty per cent chemically pure solution of Epsom salts. This is given intramuscularly, preferably deep into the deltoid. About thirty minutes later, a second hypodermic is given of the Epsom salts alone. It is at this time that the rectal instillation is given. The method we use for this instillation is that of Cowan and is as follows: The patient is placed on her left side. A large catheter is inserted high into the rectum, care being taken to carry the catheter well above the descending part. The mixture is then injected by means of a triumph syringe, very slowly and between pains. It should take some ten minutes to inject the entire amount. Pressure with a folded towel is now made upon the perineum for about ten minutes more. If this technique is carefully followed, the percentage of successes is greatly increased, as the entire mixture is retained, due to the ball-valve-like action of the baby's head. Within about fifteen minutes, the patient shows marked relief from pain, and if left in a darkened and quiet room, a tendency to doze. At this period ether can very easily be smelled on the patient's breath. The analgesia lasts for a period of about five hours. If at any time before this the patient shows a tendency to come out of the anesthetic, 2cc. of fifty per cent Epsom salts is given intramuscularly and it is really remarkable to see her in a few minutes lapse into a state of semi-consciousness.

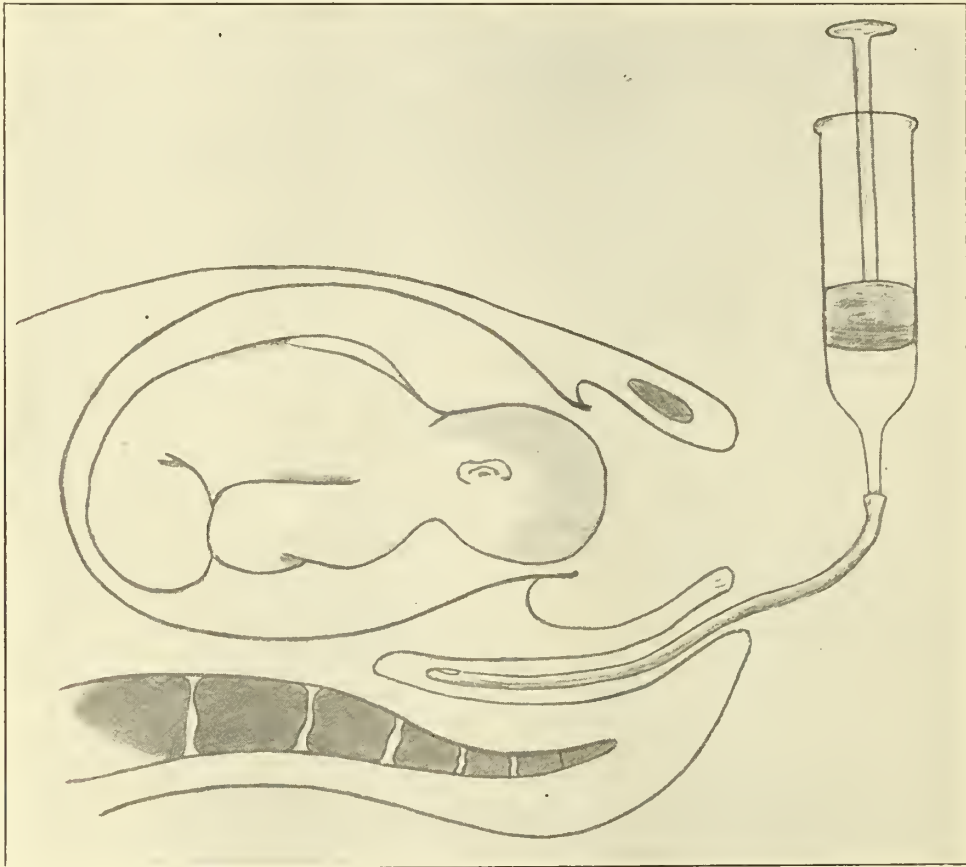
A few practical suggestions concerning the preparation of the patient for synergistic analgesia, gleaned from our observations, are not amiss. In the first place, all preparation, except the final scrubbing and draping, should be completed before the analgesia is started, as each added distur-

bance lessens the likelihood of success. Secondly, the preparatory enema should be ordinary tap water or saline, and not soap-suds or oil and glycerine, as these latter two are irritants and increase peristaltic movements, thereby favoring expulsion of the retention enema. Furthermore, if a purgative has been given a short time before or just after the patient has gone into labor, it is more than likely that the instillation will not be completely retained.

It has been my experience that this method of analgesia retards the progress

sufficiently lasting in those cases of occiput posterior which are slow to rotate, and if the patient is to have relief during this entire trying period, it is necessary to repeat the procedure completely. This is perfectly safe, according to Gwathmey, if about five hours have elapsed since the first rectal instillation.

Synergistic analgesia, however, is not without some drawbacks. In the first place, the patient should not be left alone after she is under its influence. True, she does not need the expert watching that is so essen-



Showing the Cathetic Introduced above the Presenting Part

of labor in fully twenty per cent of the cases. This, in my opinion, is not a vitally serious objection. Lately when this has occurred we have given 2-3 min. of pituitrin as an uterine stimulant, with excellent results. The technique which I shall employ in the future will consist of omitting the quinine and alcohol from the retention enema, and the substitution of this by the hypodermic injection of 2-3 min. of pituitrin when indicated.

Another point of particular interest that we have noted is that the analgesia is not

tial for twilight sleep; nevertheless, the patient must be watched that she does not roll out of bed, and also that she does not choke, from her tongue dropping back, if she is too greatly relaxed.

As to the danger of the anesthetic itself, that is, considering the toxicity of both ether and magnesium sulphate as used in this method, I shall quote from a letter from Gwathmey himself: "Generally speaking, the difference in the anesthetic and minimum lethal dose of ether as determined by Dr. Hooper, experimenting upon albino

rats and using the internal saphenous vein, is represented by the number 2 1-2. The same difference in regard to magnesium sulphate is merely a fraction. By combining a 6 per cent ether water solution with a 6 per cent magnesium sulphate solution, the same difference is expressed by the figure 2, which means that we have a 50 per cent margin of safety when we combine the two drugs. As used at the Lying-In Hospital, the synergism is procured and we have a much wider margin of safety, because we use a much larger proportion of ether than we do of magnesium sulphate."

In an article in the Bulletin of the Lying-In Hospital for November, 1924, Gwathmey sums up his ideas on twilight sleep and synergistic analgesia as follows: "In 'twilight sleep' fetal asphyxia occurs in 9.6 per cent of cases, but fetal mortality is not above the average." (Jellett & Mandill—Manual of Midwifery) In our series the percentage is less than one per cent and this case was not fatal. The usual objections against twilight sleep (a) prolonged labor for hours and days, use of forceps more often necessary, the percentage of ruptured perineums higher, failure of occipito-posterior positions to rotate normally (b) restless delirium and violence, disturbance of heart and lungs, postpartum hemorrhage and uncertain results, do not seem to obtain with the present method.

"As a general proposition "synergistic analgesia" is a safer condition than either oil-ether analgesia or "Twilight Sleep." In Twilight Sleep too much dependence is placed upon morphin and its action is too greatly stressed—hence the high per centage of asphyxia. With the synergistic method, we attempt to secure relaxation with the magnesium sulphate as well as using it for its power of prolonging the effect of the morphin. Ether is a powerful stimulant and analgesic as well as anesthetic. The attempt is made here to use it for only its stimulating and analgesic properties and we believe we obtain this by using it in the minimum dosage as given."

(My experience with synergistic analgesia is based upon forty cases conducted at Touro Infirmary. Much valuable assistance and several valuable suggestions were given by the senior obstetrical resident, Dr. Guy Knolle).

#### Conclusions

1. The ideal obstetrical anesthetic is not at our command.

2. The anesthetic must be selected to suit the individual case and the particular conditions encountered.

3. In this day of enlightenment and progress, when such advances have been made along the lines of anesthesia in surgery, every pregnant mother has a right to expect and demand a confinement with a minimum amount of pain and discomfort, without endangering her life or that of her offspring.

4. It is the solemn obligation of every physician practicing obstetrics, to familiarize himself with the progress made in anesthesia, and to employ that which in his experience and judgment is best suited to each particular case.

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## DISCUSSION

Dr. Hilliard E. Miller: I have had about eight months' experience with synergistic anesthesia, this experience covering some thirty-five or forty cases, and I can say that I have had the same gratifying results which Dr. Levy has reported in his paper. He has covered the ground so thoroughly that there is little left for me to say except possibly to enlarge on a few points which experience has brought out. I have estimated roughly that perfectly satisfactory analgesia is obtained in sixty-five per cent of the cases, partial analgesia in twenty-five per cent, and little or no results in about ten per cent. In the latter two groups, where the analgesia is either partly or entirely unsatisfactory, I believe the trouble lies in faulty technique, either not getting the catheter above the baby's head, a point which Dr. Levy emphasized, or not having a perfectly clean bowel, in which case much of the anesthetic is wasted.

A point which I do not think Dr. Levy stressed sufficiently is the importance of absolute quiet. Keep the family out, close the door, shut the window and stop the patient's ears with cotton. I have repeatedly noticed in cases in which the analgesia was perfect that the ear reflexes were the last to be obliterated. The patients have remembered none of the details of labor or delivery but have mentioned the slamming of doors or some other noise which occurred during the time.

Never, even when perfect analgesia is produced, does the patient fail to answer questions. In the second stage you can even encourage her to bear down. She is aware of no discomfort and is perfectly willing and able to assist you voluntarily. Even when the analgesia is not perfect nervousness is relieved. The patient lies perfectly quiet without using up her strength in apprehension and fear of the coming pain.

In a small number of cases, as Dr. Levy mentioned, there may be some slowing down of the labor. In such instances when the membranes were intact or even when they were ruptured and when the cervix was fully dilated we had no hesitancy in using small doses of pituitrin. In the cases in which because of the interests of the mother or the child labor had to be terminated by forceps the amount of ether given by the drop method must be carefully regulated. You will rarely find, even when a mid forceps delivery is necessary, that more than two or three drams of ether need be given to secure complete anesthesia.

Dr. T. B. Sellers: About four years ago I made a preliminary report on the use of nitrous oxide and oxygen in obstetrics. At that time I was favorably impressed with my results. During the past four years I have used it almost routinely. From my personal experience, and observation of the results of others, I am convinced that Nitrous oxide and oxygen analgesia is superior to any other in my hands.

I have used Gwathmey's synergistic analgesia in about ten or twelve cases, with practically the same results as those you have just heard reported. Its inexpensiveness and simplicity appealed to me, especially contrasting it with the cumbersome self-administering apparatus, for the administering of nitrous oxide and oxygen. I decided to give the synergistic method a try-out and, the results being equal, adopt the synergistic analgesia. Up to the present time I am still in favor of nitrous oxide and oxygen. I use morphine sulphate, 1/8 to 1/6 grain, and scopolamine, 1/200 grain during the first stage of labor. As

soon as the effect wears off, then start the nitrous oxide and oxygen. It can be given from six to twelve hours without ill effects. The advantage of nitrous oxide and oxygen is that your patient is conscious except while she is taking the nitrous oxide and oxygen. She can converse with you between pains. Nitrous oxide and oxygen is applicable in at least 99 per cent of cases and about 85 per cent efficient in the point of analgesia.

Dr. F. Temple Brown: Dr. Levy is to be congratulated on his magnificent paper, in which some very important points in anesthesia in obstetrics have been brought out. The use of anesthetics in obstetrics is something which has been practised only during recent years.

A few years ago I purchased a gas oxygen apparatus for my obstetrical cases. Prior to this I tried the hyoscine, morphine and cactin, which gives results something like scopolamine and morphine for relief of pain. I do not like scopolamine and morphine because it produces a great deal of delirium; many cases get wild, scream, and frighten everyone in the house. The last case in which I used scopolamine the patient kept trying to catch things off the wall—her people did not like it at all and got very excited about it, so I discontinued its use. About a year ago, in my service at Charity Hospital, I started using rectal or colonic anesthesia and like it very much. I did not have the Gwathmey method at first, but used three ounces of ether with one ounce of olive oil and Z7 of alcohol, . . . ? . . . the only difference being that in the Gwathmey there is a little less ether in the preparation. Having used it in forty or fifty cases I can thoroughly agree with Dr. Levy regarding the satisfactory results obtained.

There is a point in technique, which I consider very important, that Dr. Levy has not brought out in his paper, viz: the time to start your rectal analgesia. The hypodermic of epsom salts, morphia, I think, ought to be given when you have two fingers dilation; then, when you get a little further on (three fingers), start your rectal anesthetic. It will slow up pain considerably in some cases but, as he states, small doses of pituitrin will keep up contraction. That has been the greatest trouble at Charity Hospital in our service: to get the intern to use this method; he gives it, goes off, the patient falls asleep, all pains cease and when he returns a couple of hours later there is very little progress. However, if you stay there and watch, giving small doses of pituitrin in cases which slow up, you will proceed and experience no trouble whatsoever. The solution is very cold and for that reason must be administered slowly. It is with difficulty that we get the patient to retain it, but this can be overcome by placing the patient's left side in the Sims position and producing pressure on the perineum by holding the nates together for about fifteen minutes; you will obtain a fair amount of absorption during this time and in five minutes smell ether on the patient's breath. When the fifteen minutes has elapsed place in any position desired.

Remember to watch your case—never leave her alone as she is liable to roll off the bed. This happened to me with a patient at Charity Hospital, who might have been seriously injured but, fortunately, was not hurt.

Dr. E. L. King: In regard to the use of ethylene in obstetrics I can say that I have, personally, had extremely good results with it, using it in a fair number of normal deliveries, several low forceps,

also two Caesarian sections in which it was the only anesthetic used. There is a definite slowing of the labor under ethylene, more so than in the use of other anesthetics. Extreme caution must be exercised towards the end, or the patient will practically quit: the primipara especially will slow down, making necessary the application of low forceps. I have not experienced any tendency to post-partal bleeding except in one instance, and in this case it was not alarming.

The following results were obtained in fifty cases in which synergetic analgesia was used—a few other cases in which it was given were terminated in other ways, so they are excluded from the list.

In 17 cases the analgesia was very good, eight of these being perfect, the patient having no recollection of the birth of the baby.

In 9 cases it was good.

In 9 cases fair.

In 5 poor.

In 10 a failure.

Total 50.

In seven cases, or fourteen per cent, it was necessary to resuscitate the baby. Some were easily resuscitated; in the case of the others, it took as long as ten minutes before they would breathe properly. There was one macerated syphilitic fetus and a monster with hydrocephalus and spinal bifida who died a couple of hours later.

In some instances I believe that our failure to produce results can be partly explained, and possibly wholly explained, by the fact that the anesthetic was administered either too soon or too late—in one or two cases the rectal anesthetic was given only ten or fifteen minutes before the baby was born and we could expect no results. The best effects in the rectal instillation are obtained when it is given two or three hours before the birth of the baby. If given longer than four to six hours before delivery our results were not so good—if too late, there was no chance of producing anesthesia. In the cases where the babies had to be resuscitated, there was apparently no relation between the time the anesthetic was given and the time of birth and no apparent relation to the time the morphine was given and the time of birth. In most cases two or three hours had elapsed before the birth, so I do not think we can charge the effect on the baby to morphine. In many cases there was a definite slowing of the labor, in one case particularly, a primipara, the anesthetic was given one morning, the cervix at the time being dilated three or four fingers, and the pains strong and regular. The patient did not have any pain for eighteen hours and was finally delivered under ether anesthesia, by inhalation—baby and mother were all right. There were some other cases in which the anesthetic was discontinued and ether was given by the drop method. Rectal anesthesia was given as per routine and as the patient did not deliver in the usual time, labor finally terminated in delivery under inhalation ether anesthesia. In four cases not included in this list the patients were delivered by low forceps for various reasons. In one case of face presentation, and one case of twins, the anesthetic did not have its full effect. Three times we used pituitrin to accelerate the labor after it had been slowed down with rectal anesthesia.

So, while we have adopted rectal anesthesia as a routine procedure, our results have not been quite as favorable as those of Dr. Levy, probably because the technique has not been as accurately developed, nor as carefully followed out. It has

certainly one great advantage, which is not to depend on a third person, sometimes necessitating keeping an anesthetist waiting three to four hours.

Dr. E. E. Allgeyer: I am not going to discuss this essay from the viewpoint of synergistic analgesia but I merely want to say a few words about Ethylene and Nitrous Oxide analgesia in this work. My experience is principally with the latter; the former not having proved so satisfactory.

Ethylene it seems did increase the bleeding when the manufacturers first placed this gas on the market but the latest product, now greatly purified, has eliminated this to some extent.

The first time that I employed this gas in obstetrics, labor was stopped and believing that this may be a coincidence we again tried with similar results which made us discard it in preference to nitrous oxide. For operations which are at times necessary in this work we employ it entirely. In fact in eclamptic cases the increase in the amount of bleeding is a good means to decrease the height of the blood pressure.

Nitrous Oxide in our experience seems to produce the most desirable analgesia, for it only caused a cessation of labor in one instance and at no time were we ever alarmed about the condition of the child, as they always breathed inside of a few minutes.

The disadvantages to the use of nitrous oxide are the additional expense and the fact that in order not to prolong the use of the gas too much it is not customary to start until full dilatation of the cervix in primiparas or three fingers dilatation in multiparas, the patient having to stand the pain until that time. This, at that, can be eliminated if one either use a self administrator, in that event causing an obstetrician to become an anesthetist to a great extent or a hypodermic injection of morphine in magnesium sulphate can be given in order to relieve until the time is ripe to begin the use of the gas.

Dr. J. W. Newman: Notwithstanding that I have had the privilege of reading Dr. Levy's excellent paper, I cannot refrain from adding a few words to supplement his remarks, especially regarding anaesthesia in labor . . . not the choice of anaesthesia, but the necessity of administering an anaesthetic in all cases of labor. Those who have had great experience in obstetrics have, undoubtedly, seen a number of cases where the neglect to administer any anesthetic has endangered both mother and child, for example: the woman starts to bear down long before the cervix has completely dilated, then, when the critical time has arrived and she should give assistance by bearing down, she has reached the stage of exhaustion and an accouchement force is necessary. Again, in these cases where the child's head is being subjected to trauma on account of a rigid, unyielding cervix; then when the cervix has completely dilated and the child's head passes through instead of the woman being under the influence of an anaesthetic whereby the child's head is allowed to assume its normal condition, the mother bears down again subjecting the head to pressure against the rigid perineum. Result, the child is born dead. Time does not permit me to discuss the virtues of each anaesthetic spoken of, but there are two points regarding synergistic analgesia to which I wish to call your attention and must receive consideration at our hands.

(A). Labor is undoubtedly slackened through giving synergetic analgesia, but this can be overcome to a great extent by giving quinine by mouth. We employed this method successfully

when using Gwathmey's oral method of ether anesthesia. I do not think this method had ever been tried before in obstetrics. The results were very good. We discontinued its use because several surgeons of Base Hospital No. 24 in France who had had experience with this method in surgery, considered it dangerous.

(B). In cases where complications exist we must take into consideration the possible influence of ether on the resuscitation of the child, for example; A short time ago we were compelled to apply mid-forceps in a primiparae. The child was delivered in a state of asphyxia with the cord around its neck. Such cases we know are difficult to resuscitate, add to this the fact that the child's breath smelled strongly of ether, you will realize that through this unhappy chain of circumstances, that is mid-forceps, cord around the neck and the child intoxicated from ether, the resuscitation was very difficult. We certainly cannot blame the ether for the child's death, but there is no doubt that it was one of the contributing factors.

A word in regard to scopolamine and morphine. I think I was the first and one of the most ardent advocates of this method in New Orleans, using it in over one hundred cases, with very good results in some, pretty good in others, rather poor average in all, but in our last series nothing but poor results. One of the most enthusiastic advocates of twilight sleep lives in your home state. About two years ago she visited in this city and gave a most detailed description before this body of her work with "Twilight Sleep." She assured us that her results were excellent, that it never became necessary to restrain patients and that the anaesthetic was perfect, obviating the necessity of assisting even with small inhalation of ether. Her results were so far superior, even to those achieved in Freiburg, that I deemed it advisable to study her methods carefully and therefore sojourned to Chicago where I spent some time observing the cases in her department. The poor results achieved even with the use of mechanical devices resembling straight-jackets made me decide at once never again to employ this method of analgesia. A few days ago an article appeared in the daily press stating that Mrs. Nicholas Longworth had been delivered by Dr. Jos. De Lee of Chicago and that one of the principal considerations in her selection of an accoucher was her desire to have twilight sleep and that her wish

had been granted, that is, twilight sleep successfully employed. Knowing Dr. De Lee's antagonistic attitude toward "Twilight Sleep" I wrote to him regarding this newspaper article and asked what had brought about the change in his opinion regarding this method of anaesthetic. Imagine my surprise when I received an answer from him, the first lines of which read as follows:

"My attitude regarding twilight sleep has not changed and Mrs. Longworth did not have twilight sleep."

I feel that I would be derelict in my duty both as an obstetrician and as a citizen if I did not avail myself of this opportunity to denounce publicly those who are responsible for the appearance of such articles in our daily press, issuing false statements for the purpose of personal propaganda and thereby creating an erroneous impression in the minds of the inexperienced obstetrician by most disastrous results to the mother and her child.

Dr. Walter E. Levy (concluding): I wish to call more attention to that diagram. It shows that you should get above the head or presenting part with the catheter. The head then acts as a ball valve. If the instillation is not placed above the head it will be forced out as the head then acts like the piston of a plunger.

I did not go into detail with every anesthetic,—I could not in the limited time placed upon this paper; I merely wanted to hit the high spots, show why we rejected some and used others, and to bring out the discussion.

I think that synergistic anesthesia is something that is going to be really worth while, perhaps not so much in Hospital service where we have an anesthetist always at hand, but rather in home practice. I had occasion to go to Hammond to speak before their society and I advocated this for country practice. It differs from twilight sleep; the effect produced by the latter is not anesthesia, not analgesia, but amnesia; they are having the pain and everything else but do not remember it. And remember, a case of twilight sleep has to be most carefully watched.

I had occasion to hear Dr. Gwathmey speak on rectal anesthesia and he claims that following his technique and using the standard mixture of ether, 2 1-2 oz. olive oil, 1 1-2 oz. quinine 20 gr.; and alcohol, 3dr, we are thirteen times within the zone of safety.



# New Orleans Medical and Surgical Journal

Established 1844

Published by the Louisiana State Medical Society under the jurisdiction of the following-named Journal Committee.

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Material for publication should be received not later than the twentieth of the month preceding publication. Orders for reprints must be sent in duplicate when returning galley proof.

THE JOURNAL does not hold itself responsible for statements made by any contributor.

Communications should be addressed to: *New Orleans Medical and Surgical Journal*, 1551 Canal Street, New Orleans, La.

## PROFESSOR G. JEANNENEY

AND

## THE CANCER PROBLEM IN FRANCE

On October 13, 1924, the Orleans Parish Medical Society held a special meeting in honor of Professor Jeanneney of Bordeaux. In introducing the distinguished lecturer, Dr. Matas referred to the triple mission that had brought Prof. Jeanneney to New Orleans. He had come as a delegate of the French government to report on the progress of the cancer problem in the United States and had visited all the leading medical centers of this country, including Canada. He had come as a delegate of the French Association for the cultivation of the medical and scientific relations between France and the friendly and allied countries. As a member of the faculty of the ancient capitol of the Gironde, he had brought the greetings and good will of the Faculty of Bordeaux to the metropolis of Louisiana, in testimonial of the traditional friendship which has existed between the

people of the vine clad hills of the Garonne and the people of New Orleans, where the French language and the French traditions were still preserved as a relic of old colonial days, and in a way that always warms the heart of every Frenchman who visits this city.

Not long ago Professor Portmann, of Bordeaux, had visited New Orleans as the associate of Professor Moure, the founder of the Ear, Nose and Throat specialty in France. Dr. Portmann had lectured and operated here in the hospital founded by Dr. deRoaldes, the founder of this specialty in New Orleans. Dr. deRoaldes was a great friend and admirer of Prof. Moure and frequently visited his clinics in Bordeaux. It was from this source that much of the pioneer work of Dr. deRoaldes in New Orleans was inspired. The contributions of Bordeaux,—the birthplace of Montaigne and of Montesquieu,—to the scientific progress of medicine and surgery were well known and especially appreciated in this city, where the profession, with good reason, now accorded a hearty welcome to Professor Jeanneney, who so fittingly represented his country, not only in his official capacity, but through his brilliant and engaging personality. Professor Jeanneney, though young in years, has achieved extraordinary success in his scientific and medical career. He is an indefatigable worker as investigator and writer. Within the thirteen years that had followed his agrégésip in Bordeaux, he had contributed over 150 papers on a great variety of subjects, including in these a number of original studies in anatomy, physiology, teratology, vaccine therapy, and, especially, oscillometry in its application to surgery. As a pupil of Pachon, he popularized the ingenious instrument designed by that distinguished physiologist by adapting it to the study of the peripheral and collateral circulation in determining the viability of the dependent parts before and after the ligation of the great vessels and in threatened gangrene of the extremities. In fact, the value of oscillometry as an index to the condition of the circulation has been demonstrated and made more thoroughly practical by Jeanneney's original and numerous clinical and physiologic researches, than by any other living observer. These researches have won for him, among other honors, the gold medals and coveted distinctions of the Prix Goddard, Delord and Marjolin-Duval of the French National Surgical Society, and, last but not least, the Croix de Guerre for his war service in 1915.

At the close of his lecture on Cancer, delivered in English, he gave, by request, a very illuminating and interesting demonstration of the application of oscillometry to surgical problems with the aid of the Pachon instrument. It is therefore with more than usual pleasure that we publish in this number of the Journal a brief summary of Professor Jeanneney's instructive lecture, together with a record of a very interesting and agreeable occasion.

#### S. M. D. CLARK

It is with profound regret that we chronicle the death of our beloved confrere, Samuel Marmaduke Dinwiddie Clark. A leader among Southern gynecologists; ever a champion of organized medicine; a teacher ever-popular with his pupils; in a word—a man. Dr. Clark's untimely death occurred on April 26, 1925.

He was born July 28, 1875, at Devall, West Baton Rouge Parish, Louisiana, and received his early education from private tutors. He graduated from Louisiana State University in 1895, obtaining a B. S. degree. In 1900 he received his M. D. degree from Tulane university. In 1902 Dr. Clark married Miss Elise Cockerham, of Natchitoches, Louisiana. He served internship at Touro Infirmary and Charity Hospital, New Orleans.

Dr. Clark served on the medical faculty of his Alma Mater for twenty-two years. He was made assistant demonstrator of operative surgery in 1903; was appointed chief of clinic, chair of obstetrics and diseases of women and children 1904-1905; was lecturer and clinical instructor in gynecology and obstetrics in 1905; was associate professor of gynecology from 1911 to his death.

Dr. Clark was a familiar figure at parish, state and national medical gatherings. He served the Orleans Parish Medical Society as secretary and was secretary of the Charity Hospital Alumni Association.

During the World War Dr. Clark served with rank of major and was assigned to surgical group No. 4, in France. He was a fellow of the American College of Surgeons, fellow of the American Medical Association, Southern Surgical Society, member Louisiana State Medical Society, Orleans Parish Medical Society, etc. He was a member of the Blue Lodge of the Masonic Order, a member of the Boston Club, the Audubon Golf Club, New Orleans Country Club, Metairie Country Club, Kappa Sigma and Phi Chi Fraternities.

Dr. Clark's contributions to medical literature were ever timely and constructive. Among his most notable papers might be mentioned: "The Value and Limitations of the Pessary in Gynecology"; "Discussion of Cesarean Section"; "Preliminary report on the use of the Percy Cautery in carcinoma uteri, with special reference to its use as a forerunner to the Wertheim Operation"; "The Value of the Combined Method in the Treatment of Cervical Carcinoma;" "The Treatment of Pelvic Infections Should be Standardized."

Doctors W. J. and C. H. Mayo, upon learning of Dr. Clark's death paid the fol-



Dr. S. M. D. Clark  
1875-1925

lowing tribute: "Through the death of Dr. Clark there has been lost to the medical profession one of its foremost exponents. For a quarter century he has made many splendid contributions to medical science. He was a public spirited citizen of high character and a true and loyal friend."

Dr. William D. Haggard, president of the American Medical Association, recognizing the great loss to American medicine in the death of Dr. Clark, paid fitting tribute in a message to Mrs. Clark.

His geniality won him friends instantly, and his loss, as surgeon and as teacher, will be keenly felt by his friends and pupils alike.

### FELLOWSHIPS FOR GRADUATE WORK IN OBSTETRICS AND PEDIATRICS

The Tulane School of Medicine has just received a gift of funds for the purpose of establishing a model obstetrical clinic and for the purpose of providing two fellowships in obstetrics and one in pediatrics to graduate students in these subjects. The funds which make this possible have been given by the Junior League of New Orleans and the fellowships are to be known as the Junior League Fellowships.

The details of the courses to be given and the work to be done by the students have not all been worked out. The courses will take some two or three years to complete and would include, not only intensive work in the particular specialty, but also a considerable amount of work in certain fundamental branches bearing upon these specialties. The student will be required to do a considerable amount of research work and to present one or more acceptable thesis covering his research. Upon satisfactory completion of the course, the fellow will then be granted a higher degree, either Bachelor or Master of Science, from the Graduate Faculty of the Tulane University.

These fellowships will afford wonderful opportunities for ambitious men and women who, after graduating in medicine and after having had one or two years of hospital internship, wish to continue their studies and perfect themselves in obstetrics or pediatrics. These fellows will receive stipends of sufficient amount to maintain themselves while pursuing their work.

Applications are being received and it is hoped to be able to make selections and have one or more fellows start early in July.

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### AUGUST VON WASSERMANN

The death of Professor August von Wassermann on March 16, 1925, has deprived the medical world of one of its ablest investigators and the human race of a benefactor. Through his continued studies he has made several lasting contributions to the body of knowledge basic to general bacteriology.

Wassermann was born February 21, 1866, at Bamberg, Bavaria. His father was a royal banker who gave his son the opportunity to gain a sound general and professional education. Wassermann studied medicine at the universities of Erlangen, Munich, Vienna and Strassburg, receiving his degree from the last named institution

in 1888. He then became assistant for infectious diseases at the Koch Institute of the Charite at Berlin, gaining the title of professor in 1898. In 1901 Wassermann was given an appointment to the University of Berlin as Professor Extra-Ordinary (Privatdozent), a position carrying with it no emoluments outside of the opportunity to teach and experiment in the university medical school and its laboratories. Within a year his unselfish devotion and keen interest in the science of medicine brought him a full professorship. In 1906 he assumed the duties as head of the Division for Experimental Therapy and Serum Research at the Royal Institute for Infectious Diseases at Berlin. In 1913 he added to his duties those of director of the newly founded Kaiser Wilhelm Institute at Dahlem, near Berlin, an institute for experimental therapeutics.

As a mark of appreciation of beneficial public service the title of Secret Councillor (Geheimrat) was conferred upon Wassermann in 1907; he was also awarded the Japanese Order of the Holy Treasury, the Turkish Order of Ozman, the Spanish Order of Elizabeth the Catholic, and the Reichs Alder Order.

Professor Wassermann was a prolific contributor to medical literature. As an introduction to Ebstein and Schwalbe's Handbook of Practical Medicine, he has written an able discussion concerning general studies on infectious diseases, especially influenza. He was also a regular contributor to the Eulenburg Encyclopedia, writing on immunity and serum therapy. He published many articles on newer subjects, such as hemolysin and precipitin. His best known works are contained in the Handbooks of Pathological Microorganisms, which he published in collaboration with Kolle.

Wassermann made a far-reaching and important contribution to forensic medicine by "his precipitin reaction which distinguishes the blood of men and animals by differentiating albumin bodies contained therein."

His greatest discovery, the complement fixation test in syphilis, was announced in 1906. This, the so-called "Wassermann Test," is an application to syphilis of a general reaction discovered by Bordet and Gengou.

An appreciation of the vast importance of the use of the Wassermann test as an aid in the diagnosis and treatment of syphilis may be gleaned from data collected and compiled by the Division of Venereal Dis-

eases of the United States Public Health Service. The 165 laboratories of State Health Departments and State Institutions, scattered throughout every state in the Union and included in this investigation, administered 990,130 Wassermann tests in 1923. This figure, when reduced to more evident terms, means that these 165 state laboratories have given one Wassermann test per every 106 people in the United States. The importance of the Wassermann test is further enhanced by the fact that these figures do not include many Wassermann tests made by private laboratories.

Though Wassermann's name has been connected with important researches dealing with the problems of cancer and tuberculosis, he has enshrined his name in medical annals by virtue of his work in the diagnosis and treatment of syphilis. Wassermann, a distinguished pupil of Koch and Ehrlich, has earned the name of a great benefactor of humanity.

#### MEDICAL ECONOMICS

Some twelve months ago, while homeward bound on a Pullman, after having attended the annual meeting of the A. M. A. at Chicago, two members of the Journal Committee were discussing the problems of our *Journal* and the question arose as to how we could make its interests more far-reaching and its columns more interesting.

In the midst of the discussion the two committeemen were joined by Dr. Chas. A. Bahn and he volunteered the suggestion that a department devoted to medical economics might prove of interest and benefit to our readers. The suggestion met with hearty approval all around and Dr. Bahn was asked on the spot to edit such a department. He consented with the proviso that he be allowed a 'question and answer' column and that he receive the support of the readers in determining just what matters interested or puzzled them most.

In this fashion the "Medical Economics" department was launched and Dr. Bahn has contributed most liberally of his time and energy to make this department one worth reading. If anyone still questions the soundness of such contributions he has only to read "Part 9," which appeared in the May issue to be convinced. Dr. Bahn's philosophy furnishes much food for thought and his arguments are based on a practical knowledge that is irrefutable.

Now, the Editor desires to make an un-

usual request of our readers, and that is that you write to Dr. Bahn telling him just what phrase of medical practice interests you most. In every issue he has asked that readers send in questions and suggestions, in the interest of this department, but so far has met with little co-operation.

Do you, or do you not, wish this department continued. It began as an experiment and we feel that it has added materially to the value of our *Journal*. But we want your opinion. Address communications to Dr. Bahn direct. Thank you.

#### VENEREAL DISEASES

An increase in the number of cases of venereal disease reported in the United States in the year which ended June 30, 1924, over the number reported in the previous corresponding year is disclosed by the figures recently made public in the annual report of the Division of Venereal Diseases of the United States Public Health Service. The report indicates that the increase in the fiscal year 1924 amounts to 27,382 cases, of 7.2 per cent. A total of 363,063 cases of venereal disease were reported to the various state boards of health from all sources. This total was composed of 193,844 cases of syphilis, 160,790 cases of gonorrhoea, and 8,429 cases of chancroid.

"The fact that the 1924 statistics show an increase over those for 1923 does not necessarily mean that venereal disease was any more prevalent in the United States last year than in the year before," explains the Chief of the Division of Venereal Diseases.

"The greater number of cases now on record at the state boards of health," he continues, "may well be accounted for by the increased efficiency in detecting these maladies and by more conscientious reporting of cases on the part of private physicians. For a long time the danger from syphilis and gonorrhoea was greatly enhanced by the fact that these diseases were carefully covered and concealed and were often kept secret even from physicians who might have brought about a cure. Fortunately, people are now learning that they must go to a reputable physician or clinic if they wish to be cured, and laws requiring that these cases be reported to the state boards of health are making it possible to obtain some idea as to the prevalence of syphilis and gonorrhoea in the country, although there are many cases that still escape discovery."

During the fiscal year just passed, 504 public clinics reported to the state boards. The clinics treated 118,023 new cases of venereal disease made up of 65,046 cases of syphilis, 49,029 cases of gonorrhoea, and 3,949 cases of chancroid. A total of 2,147,087 treatments were given. The fact that these clinics made 302,152 Wassermann tests for detecting syphilis and 203,008 examinations to discover gonorrhoea would seem to indicate that people are beginning to realize the terrible consequences that follow in the wake of these diseases and are willing to take advantage of reputable opportunities for cure.

Reports from 37 correctional and penal institutions were received by the Division. The efforts of those in charge of these institutions have resulted in a large increase in the number of venereally diseased persons discovered and treated. New patients to the number of 7,045 were admitted to treatment in 1924, an increase of 44 per cent over the year 1923.

The menace of venereal disease is one that is being fought by the United States Public Health Service and the various state boards of health acting in connection with municipal health officers. These governmental agencies are trying to impress upon parents, teachers, young people and others the need of wholesome sex education, of prompt medical attention and the necessity for the passage of modern health ordinances and legislation. Among the social institutions which can aid in the fulfillment of this program are the home, the school, the church and the press.

#### RECOVERED LEPEERS DISCHARGED FROM NATIONAL LEPROSARIUM

Four lepers who went to U. S. Marine Hospital No. 66, Carville, Louisiana, the National Home for Lepers, a few years ago, have been discharged, according to a statement made today by Surgeon-General Hugh S. Cumming, of the United States Public Health Service. They are no longer a menace to the public health, the disease having been cured, or, according to official parlance, "arrested." The conditions under which lepers are released from this institution are exceedingly rigid. They require special observation for a period of one year, including monthly bacteriological examinations to show that the leprosy bacillus is absent from the tissues. Certification of cure is also required from a board of three medical officers stationed at the hospital and experienced in leprosy.

The treatment at Carville includes the use of chaulmoogra oil, special preparations of mercury used intravenously, X-ray therapy, surgery of superficial areas of involvement, hydro-therapy, and the violet ray. The results of treatment have been sufficiently encouraging at this institution to induce numerous other patients, of whom there are believed to be several hundred in the United States, to agree to their transfer. A special car fitted up for the purpose, and carrying a doctor and a nurse was used in the transfer last week of eleven patients from Florida, and seven were brought from California. There are at present 236 leper patients at Carville.

# LOUISIANA STATE MEDICAL SOCIETY

## ANNUAL ORATOR'S ADDRESS.\*

HON. MARTIN BEHRMAN.

MAYOR OF NEW ORLEANS

When I was offered an invitation to speak tonight at the annual convention of the Louisiana Medical Society I cheerfully accepted it. One of the hobbies of my public career and one that has sometimes been the subject of criticism, has been my attendance at conventions. I have, however, always held to the view that conventions are among the best possible mediums for the exchange of advanced thought on any scientific business enterprise and that the delegates who usually attend such gatherings are the very best visitors a city can entertain.

This very convention does much to emphasize the correctness of that view. You come here, the leaders of your profession from many localities in this state and nation for four days of general discussion and study of the greatest problem that confronts mankind—the preservation of human life and the relief of human kind. There is no nobler mission, no loftier endeavor in the scheme of civilization and your profession not only benefits itself by your convention, but we, your hosts, are considerably enriched by your presence.

While like most laymen, I cannot be expected to be able to discuss the things that are uppermost in your minds tonight, you must remember that for many years I have been a public official in this great metropolis, where I have had the opportunity of recognizing the fact that public health is almost as much the concern of the intelligent laymen as of the physician himself. In New Orleans especially this view has come home to us through a long series of bitter experiences. We have had here more trying and difficulty problems to solve than have ever confronted and handicapped any other great American city. We have known plagues and epidemics, deadly fevers and devastating diseases and we have Thank God, I hope overcome them forever.

There are many of you here tonight who were quite young men when I first came into prominence in a public sense in New Orleans. Most of you are aware that for 16 years I was mayor of this city and was at its helm during all the times when New Orleans was looked upon as a pariah among

the cities of the American Union. Looking back upon that time I can visualize better than most, the mighty struggles we made to rescue the Crescent City from the blight of plagues and fevers that threatened not only to lay waste the lives of its citizens and wreck its commerce but to make it one of the feared places in this country. I have therefore a deeper appreciation of the nobility and self-sacrificing devotion of your profession than is probably held by the average citizen.

Many of the gigantic strides which New Orleans has made as a port, and most of its modern advancement as a great city can be traced to the foundation it laid in making itself a city where health preservation became a hobby. You know that this city was frightfully handicapped in its early modern growth. It had inherited from an old and if you are pleased to call it a romantic age, a condition of squalor and filth and a lack of sanitation which was positive invitation for the spread of every disease known to medical science.

Some of you may recall the days I am describing. Our sewerage found its way to open canals through open gutters which lined each side of our streets. Ordinary sanitary conveniences of life were unknown among the bulk of our population. Our drinking water was provided by wooden cisterns exposed to every infection known to weather and atmosphere. Swamp infested areas occupied prominent spaces in our suburban communities. Mosquitoes and rats, sure carriers of all germ diseases, threatened the very life of our population.

With regularity we were visited with the deadly plague known as yellow fever. It was not unusual for nearly all the adjoining states to quarantine against our population and to outlaw us from all kind of travel. We slowly came to recognize these horrible visitations as a menace not only to our development but to our lives and property, and began to look around for measures to end this plague. We found that to do so we must sewer and drain our city, that we must provide our population with healthy drinking water, that we must banish the open gutter and the filthy canal, and that we must clean our streets.

The history of the battle waged by New Orleans to rid itself of the dread fever is too well known to you for elaborate recital.

\*Read before the Louisiana State Medical Society, April 21, 1925.

A great deal of it is the history of the development and growth of a great modern city. But to awaken to a realization of our needs we were forced to listen to the voice of the medical profession which pointed the way.

Yellow fever had hardly gone when we were faced with the dread epidemic of bubonic plague. The fight made by the city of New Orleans in this instance will always remain a tribute to the resourcefulness of our people and a monument to the medical profession of this city and to the United States Health service. Millions of dollars were spent in rat proofing our wharves and docks, in tearing down and rebuilding thousands of residences. It seemed at first a great hardship, but it, like all great reforms, has since proved itself one of the greatest investments this city has ever made.

And so we have gradually worked our way up to the front rank among the healthy cities of this country. A steadily declining death rate testifies most eloquently to our progress from those unhappy days to the present. And in doing this we have been building a great modern city on the ruins of an old world sea port.

How much of this we owe to the medical profession, and especially to our own health authorities no man is able to say. We certainly owe most of it.

New Orleans today, as I have said, is among the healthiest cities of the country. When I came into office years ago it was generally considered something of a risk to visit the Crescent City. This impression persisted for many years even after we had our battle won and about six years ago we undertook to let the nation know just how far advanced New Orleans was and what a safe place it was to work and live in. We spent nearly \$100,000 in presenting this city to the American republic and I believe we never made a better investment. There were those who could not see the purpose and effect of this campaign but I doubt seriously if there is a city in the United States today which occupies a more favorable or pleasant place in the minds of the American public than this old city.

And most of this has been accomplished upon the foundation laid by the medical profession of this city, state and nation. That profession has shown us the wisdom of building well for the future; has pointed out to us that in the health of a state or nation lies its prosperity.

To my mind the greatest fight the medical profession has to make is to arouse public conscience to an appreciation either of the dangers of a certain course or the advantage of another. Ignorance is the enemy of science and it is sometimes strange to behold the ignorance of the public. Why, if in my day the medical profession had attempted to show the way to health and long life by taking the child from its earliest days in school, in insisting upon plenty of outdoor regulation, in teaching them the rudiments of sanitary living, in instructing them to care for their teeth and eyes, it would have been considered as encroaching upon the rights and privileges of the parent.

But every day and everywhere we find larger evidence of the success of your efforts. We find public officials today who but a little while ago would have looked upon the health officer as a necessary evil, working hand and hand with this health officer for the accomplishment of better things. It is the new spirit of modern America, the spirit which has developed the greatest race the world has ever known and will continue to develop an even greater one. And to your profession goes the largest share of the credit for this advancement, for this new spirit. You have shown us how to develop healthy minds in sound bodies and we have but followed your lead.

In New Orleans we have still more to do. In recent years we have taken up the task of building a few badly needed modern hospitals but we have but scratched the surface. There is much ahead of us. Our great public hospital where the poor and the needy must look for treatment should be among the finest in the world. While all states and municipalities must be governed by their limitations, I sometimes think that we should not bargain and bicker too much in our expenditures nor attempt to draw too tight the line of economy where the lives of our citizens are at stake.

Within a few days I shall take up again the duties of being mayor of this city for another five years. In my platform seeking election, one of the promises I emphasized throughout the campaign was unqualified co-operation with city and state health authorities for the advancement of sanitation and public health. That promise I expect to religiously keep. I shall merely ask to be shown the way and you may depend upon my community leadership.

I thank you.

*Report of the House of Delegates to the  
General Assembly, April 23, 1925,  
New Orleans Meeting*

Gentlemen: In accordance with the constitution and by-laws, the House of Delegates wishes to report the following actions representing their deliberations and business transacted by them at the present meeting.

The House of Delegates was highly honored by the presence of Dr. Rudolph Matas during its early deliberations, who, in a very appropriate talk, spoke of some of our medical progress and present status of our medical organization.

The various meetings and minutes of the Executive Committee, Council, Report of Councilors and standing and special committees were read and properly disposed of. The President's Report was replete with recommendations and upon the report of the special committee, the following recommendations were adopted:

First: That the ambulatory treatment of drug addiction, as far as it relates to prescribing and dispensing of narcotic drugs to addicts for self-administration at their convenience, be emphatically condemned.

Second: That it is the sense of the House of Delegates assembled that it be considered unethical for any member of this Society to testify against a fellow member in a damage suit when the circumstances have been duly investigated and defence authorized by the Committee on Medical Defense.

Third: We recognize the great benefit to accrue to organized medicine from the expansion of the Tuberculosis and Public Health Association of Louisiana, and we endorse the President's recommendation of this society, and we further recommend that it be considered one of the duties of the Councilors to foster the development of this association.

Relating to the President's recommendation for an increase in the Executive Committee, we recommend that six members at large be added, and that eight members constitute a quorum, and we recommend that at the annual meeting six members be elected by the House of Delegates, three members to serve for one year, and three for two years, and that at each annual meeting thereafter three be elected to serve for two years.

Relative to the President's suggestion concerning standing committees, we recommend that all standing committees of the House of Delegates be required to hold

at least two meetings a year, and that they be given initiatory powers along their lines, this, however, is not to be construed as giving the power of action without the approval of the House of Delegates or the Executive Committee.

The Secretary-Treasurer's Report was read and referred to a committee, and the following report was adopted by the House of Delegates, whose report, which was adopted, contained the following recommendations:

"This committee on the Secretary-Treasurer's Report is highly in accord with the Secretary's recommendation regarding periodical health examinations, and hope this body will take proper steps to investigate this matter thoroughly, and initiate a plan whereby this meritorious work can be carried out. We would suggest a committee of three be appointed to properly handle this matter."

Upon recommendation of the Committee on Scientific Work, the Section on Dermatology was placed under that of General Surgery, which gives that section nine papers instead of seven. An essayist desiring to read on dermatological subjects can do so under the Section of General Surgery.

The Committee on Medical Defense made a very interesting report, which was considered by the said Committee on President's Address and disposed of in the recommendations recited above.

The Committee on Budget and Finance submitted their report and all their recommendations were adopted.

The Journal Committee made a report covering the activities of the Journal. Attached thereto was a financial statement for the past nine months. They were granted the privilege to increase their subscription rate to \$3.00 instead of \$2.00 upon recommendation of the committee, owing to the increased circulation and changes in the physical aspect of the Journal. A Censor Committee for the Journal was appointed, composed of the Editor, the Business Manager, and Chairman of Section under whom the paper was read, for the purpose of editing and preparing papers read before the Louisiana State Medical Society for publication.

The report of the Committee on the Care of Indigent Physicians was received, and after being referred to new business was disposed of.

The Report of the Committee on Walter Reid Memorial showed that at the present time there was in the bank \$442.79.



The Committee on Hygienic Marriage Law made a very interesting report, covering the activities of this committee before our State Legislature, and the present status of the Hygienic Marriage Law as in comparison to what is desired by the Committee in their modern hygienic law.

The report of the Louisiana State Board of Medical Examiners was replete with many items of their activity, and was received and filed.

The House of Delegates passed an amendment to the Charter providing for the election of a President Elect, upon the report of the Special Committee appointed at our Opelousas Meeting, who drew up the proper changes in our Charter for same.

Upon the receipt of a letter from Dr. Wm. C. Woodward, Executive Secretary of the Bureau of Legal Medicine and Legislation, soliciting the aid of our Society in a national program to help reduce the tax of physicians, a special committee was appointed and drafted appropriate resolutions to be sent to the President of the United States, the Secretary of the Treasury, our Senators and Representatives, and the American Medical Association. These resolutions condemned the unfair tax condition on the physicians which now exist, asking that the President recommend suitable legislation for their recommendation and amelioration. Upon motion duly made and seconded, the Secretary-Treasurer was instructed to pay to the Annual Arrangement Committee each year 50c per capita based on the annual enrollment previous to the annual meeting.

Applications were made upon the House of Delegates by the parishes of La Salle, Livingston, West Carroll and Richland for charters, and the Secretary-Treasurer was instructed to issue same as soon as the necessary formalities were complied with, upon the authorization of the Executive Committee.

The Committee on Public Policy and Legislation presented a very replete review, covering the activities of this committee, especially at the recent session of the Legislature, where it became necessary to combat medical bills which were antagonistic to our medical act, and likewise to support measures which were introduced for the betterment of the practice of medicine. Chief among these were the defeat of the Chiropractic Bill, which was sponsored by a well organized group of men who did all in their power to amend the medical act permitting the practice of Chiropractics. This attempt was over-

whelmed in the Committee of Legislature and never reached the floor of the House.

The matter of the physicians' occupational tax was brought up again before the House, and after some considerable discussion was referred to the Committee on Public Policy and Legislation for attention.

The Resolution Committee presented the following resolutions which were unanimously adopted:

"Whereas: The Ladies, the Local Medical Profession, Mayor of the City of New Orleans, Chairman of Committees on Local Arrangements, Hotel Dieu, Presbyterian Hospital, Tulane University, Roosevelt Hotel, and Local Press have left nothing undone to make the present meeting of the Louisiana State Medical Society both pleasant and profitable;

Be It Resolved, That the thanks be extended on behalf of our Society to all concerned for their gracious and untiring efforts to make our stay in their midst most pleasant and profitable.

Whereas: The officers and clerical force of the Society have been untiring and successful in their efforts to maintain the strength and dignity of our Society during the past year;

Be It Resolved, That the thanks of the Society be extended to our past officers and the office force for their unfailing devotion to our beloved Society.

Whereas: It has been generally commented that the business of this meeting has been transacted with such punctuality and smoothness that the fact that there was a machinery of operation was scarcely apparent.

Be It Resolved, That thanks and appreciation be extended to our Secretary-Treasurer, Dr. P. T. Talbot, and his assistants, whose foresight and efficiency rendered the above possible."

Monroe, Louisiana, was selected as the next meeting place for 1926. Dr. L. J. Menville was re-elected Speaker of the House.

In the appointment of Fraternal Delegates to our various Southern Medical Associations, the Secretary-Treasurer was instructed to make these appointments as he possibly would be in a better position to know the various members who might be in attendance at the respective state meetings.

The following officers, after being duly nominated, were elected to office:

President, Dr. E. M. Ellis, Crowley.

President-Elect, Dr. S. M. Blackshear, New Orleans.

First Vice-President, Dr. F. J. Chalaron, New Orleans.

Second Vice-President, Dr. J. A. White, New Orleans.

Third Vice-President, Dr. L. B. Crawford, Patterson.

*Councilors.*

First District—Dr. H. E. Bernadas, New Orleans.

Third District—Dr. F. T. Gouaux, Lockport.

Sixth District—Dr. C. A. Weiss, Baton Rouge.

Seventh District—Dr. V. A. Miller, Lake Arthur.

Eighth District—Dr. S. J. Couvillon, Moreauville.

*Committees.*

Scientific Work—Dr. P. T. Talbot, chairman; H. P. Jones, Elizabeth Bass.

Public Policy and Legislation—Drs. E. A. Ledbetter, chairman; E. L. Leckert, Roy B. Harrison, President and Secretary-Treasurer.

Publication—Dr. P. T. Talbot, chairman; Drs. P. S. McIlhenney, J. J. Ayo.

Medical Education—Drs. S. C. Barrow, 3 years; Maurice Gelpi, 2 years; J. A. Lanford, 1 year.

Medical Defense—Dr. R. O. Simmons, chairman; Dr. P. T. Talbot, Dr. E. L. Sanderson.

Journal Committee—Dr. H. W. Kostmayer, three years; Dr. Oscar Dowling, three years.

Hospital Committee—Drs. R. C. Ducote, Chas. Chassaignac; J. L. Scales, O. P. Daly, C. P. Gray.

Health and Public Instruction—Drs. W. H. Seemann, F. R. Gomila, G. M. G. Stafford, J. Q. Graves, J. K. Griffith.

Delegate to A. M. A.—Dr. W. H. Seemann, 2 years; Alternate, Dr. Paul Gelpi, two years.

Respectfully submitted,  
P. T. TALBOT,  
Secretary-Treasurer.

To the House of Delegates,  
In Session 1925.

Gentlemen:

Your special committee to consider the communication received from the Bureau of Legal Medicine and Legislation of the

American Medical Association, have carefully considered the material and offer the appended resolutions for adoption by this Society.

Respectfully submitted,

W. H. Seemann,  
Chairman,  
A. A. Herold,  
R. O. Simmons.

Whereas: Published reports indicate that the President of the United States will submit to Congress, in December next, recommendations for reduction in federal taxes, and

Whereas: The tax on traveling expenses necessary for attendance at meetings of medical societies, and the tax on the expense of post graduate study, constitute discriminating and unjust taxation, penalizing the pursuit of knowledge for the public good, while the pursuit of business is untaxed, and

Whereas: The amount of the war tax under the Harrison Narcotic Law is no longer justified, especially in view of the fact that other war taxes have been very generally abolished, and the continuance of the two hundred per cent increase over the amount necessary constitutes a grave and unjust discrimination against the medical profession; therefore

Be It Resolved: That the Louisiana State Medical Society in regular annual session assembled protests against the unfair tax condition existing, and respectfully calls same to the attention of the Secretary of Treasury and requests that he recommend the necessary measures to bring relief from these conditions.

Be It Further Resolved: That our Senators and Congressmen be requested to call the attention of the President and Secretary of the Treasury to the wide spread demand on the part of the medical profession for a removal of the discriminating existing taxes.

Be It Further Resolved: That each member of our Society be requested to personally enter his plea with his Congressman and Senators for relief in the premises.

Be It Further Resolved: That copies of these resolutions be transmitted to his Excellency the President of the United States, the Secretary of the Treasury, the Senators and Congressmen of Louisiana and the American Medical Association.

# MISSISSIPPI STATE MEDICAL ASSOCIATION

## *President's Address*

### MEDICAL PROGRESS AND THE INFLUENCE REFLECTED ON IT BY ORGANIZED MEDICINE\*

J. J. HARALSON, M. D.

FOREST, MISS.

I presume that the motive which constrained you to so greatly honor me in your election of me to this distinguished position was induced by my long membership in this Association, for I can lay claim to no outstanding service to the body. It has been thirty-eight years since I became a member of the Association, and during that period, I have been absent from its sessions four times. Of the roster of membership at that time, I can now think of only ten who are still with us in our association, and only about one-half of these are regular attendants. The others have either passed to the Great Beyond or are otherwise precluded from participation in our activities.

The high honor you conferred impresses me with a deep sense of the responsibility that I feel on this occasion. I now realize its magnitude. The admirable manner in which you have been presided over in the past renders it difficult, if not impossible, for me to approach the standard of excellence set by my predecessors. As you know, I am not a parliamentarian, but I shall endeavor to do my level best to preside with fairness and justice. I want to impress upon you, however, that it is not your President nor indeed your Council that have made this Association what it is, but through each member bringing facts and opinions before you for consideration. I am confident from the prestige it has attained thus far that it will "lengthen its cords and strengthen its stakes."

It is with a feeling of gratification and pride that I look back upon the history of the Association and view its marvelous progress and ever-increasing success. This feeling is accelerated by the fact that every progressive step in Medicine, Surgery and Hygiene in the state is reflected from the Association.

What has it accomplished along these lines? The Medical profession of Mississippi in its organized capacity has always

stood for higher Medical education. You have watched its progress along this line. There never was a day when an undergraduate could become a member of this Association although there were hundreds such practicing medicine in the state, and that too with a license from a body of physicians, really members of this Association. The fathers' knew that this was wrong, but they were powerless to help themselves at once. It was only by a stubborn, unyielding policy and the hardest kind of work, that the State Legislature was induced to make a higher standard. An under-graduate now does not think of going before the Board of Medical Examiners. He not only must be a graduate but he must be a graduate from a first class Medical College with a four year instead of a two year course, including the various branches of Medicine as well as a knowledge of many of the allied sciences.

Mississippi, having no Medical College, occupied a unique position in the Medical world. Being without a Medical College other states with colleges were bidding for our medical students, and it became necessary for them to raise their standards to keep pace with the higher and still higher standards fixed by this Association. Thus we become one of the leaders in the advance of the Medical Science.

We are now confronted with one of the greatest problems that has arisen in many a year. The Chiropractor is now knocking at the door of our Legislature for admittance. They want a Board of their own. This accomplished, this Board would admit incompetent men to practice who would soon drift into regular Medical practice. I cannot too earnestly insist that you use every effort to prevent this dire calamity. By such an act of the Legislature organized medicine would lose everything it has been fighting for during the last half century.

They are already at work with members of the Legislature for the 1926 session of that body, as evidenced by a letter received by a member and handed to me a few weeks ago. I think it wise to incorporate that letter in this address and is follows:

"To the Members and the Senate and House of Representatives of the State of Mississippi.

In the future you will no doubt be called upon to pass judgment on the

\*Presidential address, read before the Fifty-Eighth Annual Meeting of the Mississippi State Medical Association, Biloxi, May 12, 1925.

merits of the science of Chiropractic through the medium of a bill that will be presented before your Honorable Body; therefore, that you may more intelligently act in this capacity, the Mississippi State Branch of the University Chiropractor's Association is going to send you each month beginning with December, a pamphlet written by Dr. James G. Greggerson, who is recognized as a man of authority on all things pertaining to Chiropractic.

These little messages each month will be very brief, interesting, and enlightening, therefore, we trust you will read them carefully so you will be sufficiently informed to vote for a true Chiropractic bill in 1926 without any hesitancy on your part."

(Signed) P. M. Jackson, D. C. Ph. C.  
Secretary.

In this connection I desire to suggest and most earnestly urge that the incoming President, whoever he may be, shall be instructed to surround himself with an able body of men, and they begin at once a system of propaganda to counteract the efforts of the "Mississippi State Branch of the Universal Chiropractors Association." This work should not be delayed in my opinion.

Some two or three months ago the Legislature of the state of Tennessee passed an amendment to the law on requirements for Medical Practice. This law provides: ". . . that the Department of Education may not require or recommend standards of preliminary education of persons desiring to practice medicine, surgery, osteopathy, or any other form of the healing art in the state of Tennessee higher than the requirements of a diploma from some reputable four year high school." This amendment also removes all qualifications of those who desire to take the examination, not even requiring a diploma from any medical college. This condition is deplorable, and I only mention it to remind you that a similar sentiment prevails over the entire state of Mississippi. Sooner or later this matter will come up before our own Legislature and we might as well be prepared to meet the situation. I am not informed that the Legislature of the state of Tennessee reversed itself but it is enough to know that it passed the Legislature of a sister state which would not have been possible had there not been a strong favorable sentiment throughout that state.

Many of the recent achievements of modern medicine have been brought to the pro-

fession through laboratory workers, witness perhaps first and foremost the development of practical blood chemical methods. Blood has been examined chemically for many years but it has been only recently that the long tedious processes have been replaced by methods simple enough and rapid enough for general clinical use. And what a fertile field these tests have opened up, especially in the study of the organic processes. Determination of urea, uric acid, creatinine, and chlorides have shown the fallacies of depending on urinalyses alone as an indicator for diagnosis, progress, or prognosis in kidney and circulatory diseases, or in deciding operative risk in surgery.

With the recent important work on diabetes, it has been shown that only by blood chemical tests can this disease be recognized in its earliest stages when most amenable to treatment. Insulin, which has revolutionized the treatment of diabetes, can only be intelligently administered when checked by blood examinations, for when the urine is sugar-free, as it should be, only examination of the blood will show what the body is doing with the food ingested.

The Wassermann test has been so improved and sensitized that in competent hands so-called false positives are practically unknown and the test is recognized as an aid in diagnosis and as a check for treatment.

While chemical tests have somewhat overshadowed work on bacteria in the last few years, bacteriology is still a young science and still adding rapidly to our knowledge of disease, infection and immunity. Through bacteriology we are now able to prevent those formerly destructive diseases of the typhoid group. By bacteriology we are able to recognize and cure diphtheria; to detect susceptibles and to permanently immunize them. In a similar way we can prevent tetanus. Within the last year has been announced a cure for scarlet fever, together with means of determining susceptibility and of permanent immunization. While this latter work has not been finally accepted, it is very probable that it will prove as valuable as the work with diphtheria. Much is being learned in regard to focal infections and their remote effects, and numerous diseases of hitherto unknown origin are being shown as directly or indirectly bacterial. At the present time concentrated effort is being applied to the study of the common cold which, while not often a fatal affection, is the

cause of much loss of time, efficiency and comfort.

In the realm of parasitology, great progress has been made in the handling of malaria, yellow fever, and intestinal parasites.

While no cause or cure has yet been found for malignant growths, much intensive study is being carried out in many places and already our knowledge of the microscopic tissues, their structure, functions and methods of growth, leads to the hope that at some not distant day medicine will master or check this scourge.

It has been and still is the task of the laboratory worker to find out the cause and the process in every condition. When these are known, cure then can be evolved or the disease prevented. Such work, however, is distinctly the province of the doctor of medicine who is devoting his life to its accomplishment. This work has been retarded and much harm done in the past by unskilled technicians with vague knowledge of the basic medical sciences. As well for the surgeon to turn over his gall bladder operations to a six months' probationer or first year medical student as to ask a technician with no medical knowledge to advise him in regard to blood conditions and tissue sections. There is a national movement now on foot to establish a system of certified or approved laboratories headed only by competent doctors of medicine much the same as hospitals are approved when they meet certain standards. The sooner such a means of distinguishing the good from the bad is brought about, the faster will our knowledge of medicine through the laboratory sciences advance.

I cannot too strongly urge that this Association take definite action in this movement. We must keep abreast with the progress that is going on about us. By giving this movement our hearty endorsement, we will not only strengthen the hands of the promoters but place ourselves in a receptive mood for the benefits that are bound to follow.

Surgery is as old as man himself. During the Medieval days it was divorced from medicine and the priesthood and became a craft for the itinerant barber. I suppose we might say with correctness that surgery as an art began with Ambrose Pare who at one time in his life was the apprentice of a barber. From the time of Pare there gradually developed an art based upon sound knowledge. Anatomy and pathology became a part of the surgeon's craft. In 1842 Crawford Long first performed a surgical operation under anesthesia. Shortly

thereafter, in 1867, Lister published the results of his experiments based on the researches of Pasteur. Surgical safety then remained only for a fuller development. The field of endeavor along surgical lines materially increased the responsibility of the surgeon of today. The art of surgery is very different from the science of surgery. Of course, the art is very important, but it is the scientific part that most concerns the patient, whose safety and well-being are of chief import to the surgeon. Anxiety for the welfare of the patient should exist during the preliminary examination and operation, and follow him even after his departure from the hospital. It is a mistake for the surgeon to depend altogether on other experts for his diagnosis. He should first be well informed as to the location and discovery of the various human ills, their causes and effects and treatment. Inability so to do is an unpardonable failing. With so many opportunities from day to day for observing the external symptoms prior to operation, and of viewing the living pathology during operation thus obtaining first hand information of effect and cause, and vice-versa, it follows that these circumstances and observations should be stamped so indelibly in the mind and upon the memory of the surgeon that he, of all practitioners, ought to be a good diagnostician. Even with the influx of the many helpful aids to diagnosis, the responsibility of the surgeon is neither lessened nor diminished, for it would be more in keeping and of higher tribute to the profession that these instrumentalities should be employed for confirmation rather than for discovery.

The real surgeon, however, does not conclude his work upon the removal of the patient from the operating table, nor should his interest in the case be devoted entirely to convalescence and apparent recovery. His system should contemplate observation at regular intervals, depending upon the original ailment, until the patient is fully restored to health and able to resume his usual responsibilities.

Too much cannot be said by way of praise to this branch of the profession for the invaluable service which they have rendered humanity, and I feel sure that they will continue to merit the confidence so richly bestowed by the progressive and enlightened conscience of Medicine.

Medicine has kept pace with Surgery, Bacteriology and Hygiene, and the advance in all these branches is directly or indirectly due to organized medicine. The

demand on the part of organized Medicine for higher and still higher standards has stimulated the teachers of these branches to greater efforts until today we have a composite whole that makes the Medical Profession the greatest of any in the world and greater by far than it has been at any

stages in its history throughout all the ages.

Let me again express my sincere gratitude for the distinguished honor you have conferred upon me and pour out to you a libation of friendship, goodwill and appreciation.

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## YOUR PATIENTS *and* HYGEIA



Your patients turn to you for more than medical aid. They expect advice, counsel and suggestions regarding many phases of their physical well being —many times you would like to discuss these things, but lack time or opportunity.

Keep HYGEIA always on your reception room table. Let its articles speak to the mother regarding child nutrition and training, personal hygiene, sanitation, dietary problems. Let the father learn from Hygia the advice, the explanations, the warnings which he should have relative to matters of health and disease.

HYGEIA is a high grade, attractive monthly magazine. Well illustrated. Printed on fine paper and written in plain, understandable language. \$3.00 will bring it to your office for a year.

**AMERICAN MEDICAL ASSOCIATION**

535 North Dearborn Street

CHICAGO

## MEDICAL ECONOMICS

*Chas. A. Bahn, M.D., Department Editor.*

### PRACTICAL MEDICAL ECONOMICS

#### PART 10.

How do you compute your charges for medical services? Do you roughly estimate for each visit or patient, the most that you think obtainable for your services, or is your charge based upon its value to the patient and its cost to you in time and skill?

A study of the practical and equitable distribution of medical charges based upon the experience and observation of the profession and supplemented by accurate facts and figures would be both interesting and profitable.

Our ideal is to give every patient a full dollar's worth of real value for every dollar that we ask, and yet to allow sufficient profit that we may accumulate enough of this world's goods to provide for us and ours in reasonable comfort, both present and future.

In the commercial world there are essentially two ways of estimating value. The first is the trader's method; the service or article is supposed to bring all that can be gotten for it and it is presumed that both the buyer and the seller will probably try to take any possible advantage of the other. The other method is based on a uniform price, which assumes a reasonable cost of production and a reasonable profit for all concerned, and that neither the financial status nor the desire of the buyer for the article or the service will be reflected in the price. In the professional world, this method has not been generally adopted because the actual cost of service has not been practically determined and because the same service has a most variable value depending upon its use. We largely cling to the traders' method. Unfortunately the purchaser of professional services has no way of knowing the value of what he has bought until after he has purchased it. We assume that the poor man's dollar should buy more than the rich man's dollar because the rich man is supposed to earn dollars more easily and his life is supposed to be more valuable from a monetary standpoint. Intelligent study could materially reduce the excessively wide variations in charges which at present exist, for the same medical service.

There are several fundamental factors which consciously or unconsciously determine our charges.

The first is the actual cost to the doctor, that is the actual outlay of money to you. If your medical expense, including office maintenance, automobile for professional use, and other attendant outlay, is five hundred dollars per month containing twenty-five working days of eight hours each, the cost to you of your working time is \$2.50 per hour. If a person takes up an hour of your office time, you are out of pocket \$2.50 in actual money. Whether you treat patients, chat with your friends, work in a clinic, or teach during this time, the cost to you is the same. In the last two instances the outlay is possibly justified by the increased medical and surgical experience that you gain, by the association with colleagues, and the increased remuneration which you hope to receive, thereby.

The second factor is your salary. All of us are working on a salary, whether we work for ourselves or someone else. There are approximately sixteen hundred working hours in a year available for the examination and treatment of patients. After a reasonable number of years in medical practice, our daily production variation is probably not as great as we think.

There are two general methods of estimating production value. The first assumes a reasonable production in a given time and hence considers only the time factor. This is the method used in the employment of most assistance and is that used by labor organizations possibly because simpler. The other method bases valuation on actual production and determines the value and amount of compensation of each unit. This is probably the more equitable method where the service has not great variations.

As a physician if you charge too much for your time, no one will care to buy it, while if you charge too little you will probably not be able to accumulate sufficient to render the best service. After all the laws of supply and demand largely govern our salaries. Medical value may be estimated on the basis of the productive life and cost of education and equipment with the addition of a time factor.

The third and last factor is the value

of the service to the purchaser. Heretofore, we have assumed a reasonable productive use of time and accomplishment. Should the service, however, be of greater value to the purchaser, the question of increased compensation enters into the problem. Personally, I think that this factor is less important than most of us believe. The vast majority of our services are rendered to the middle classes who are the real producers of the nation, and whose incomes do not really vary such a great deal. Generally speaking, the expense of time, effort and money, necessary to determine accurately the financial status of patients, does not justify itself. I believe that for the majority, standardized medical charges, with reasonable variations are the most simple, equitable, and satisfactory basis of medical values.

A few very successful physicians base charges on yearly net income, but for the rank and file, I do not believe that this plan is of practical value.

Each of us must work out how much value we can put into the average working hour of our time, from the standpoint of the purchaser, who probably has to work just as hard for his livelihood as do we. The great problem that most of us are daily contending with, is how to put more value into our time that we may be entitled to greater remuneration therefore.

In some medical branches, standard charges are easily possible because there is but little variation in the amount of time, effort and expense involved in a given service. Cafeteria charging methods represent one extreme, our present methods the other.

The future will probably see more uniform medical charges somewhere between the two extremes, which at present prevail, and based with reasonable variations, on an average consumption of time, effort, skill and especially their value to the purchaser. In other words the peaks will be somewhat leveled and the valleys filled in. The sooner we see the hand writing on the wall and adapt ourselves to future necessities, instead of having to be driven into them, the better will it be for us and the public.

Occasionally a doctor deprecates society practice. Why should a number of persons not collectively employ medical service just as railroads and other corporations successfully do if the salaries paid physicians justify efficient medical assistance.

State or national medical service will probably occur only when the medical pro-

fession is unable to even fairly, efficiently, and economically conserve the public health. There is usually no tendency towards public ownership of any utility or service, as long as it is reasonably well conducted in private hands.

Practically free medical aid sustained by hospitals, communities, or states, etc., probably reduces the potential number of office patients in some communities, though how much is hard to say. Unfortunately we have no accurate facts nor figures on this subject which will really show whether or not physicians in office practice really suffer thereby. If this should be the case, physicians have the remedy in their own hands. We apparently feel that this labor of love is amply compensated by the pleasure, experience and possible prestige that we derive therefrom, or we would bring about a change. Lawyers and others who render service to the charges of the community or state are, I believe, reasonably compensated—why not physicians?

Medical charges vary greatly in different sections of the country. In our city, for example, charges are probably lower than in any other large city in the United States. The reasons are apparently, the large number of persons treated in free clinics, the number of patients necessary for clinical teaching, and the fact that our city is not a rich one, which probably means that the average person does not produce as much wealth here as in some other cities. As a result of these factors, many who could afford to pay a moderate fee for medical service just as they do for every other need of life, seek free medical attention especially in view of the fact that we have educated the public by inference that it is the most efficient. And in many instances it is, because for the person especially of moderate means where complicated and varied examinations are necessary, clinic service is more satisfactory except possibly for the delays. The doctors who work in clinics are usually reasonably well informed and medical office service and charges have such wide variations and their results are often not sufficiently coordinated that the patient can derive the greatest benefit from the expense of time and money incurred.

This department is now ten months old. The results of our efforts are hard to determine because of the difficulty in obtaining constructive criticism. We don't want you to agree with our ideas unless we have

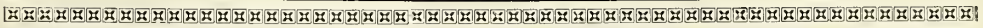


appealed to your sense of reason. We do not believe in promptly adopting every impractical experiment nor do we believe that the world is flat. We do believe that there is much to be accomplished in practically increasing our usefulness independently of prejudices of the past. This means more and better service to the public and greater financial returns with corresponding prosperity to the medical profession.

If these articles have interested you tell us as frankly and freely what you think of them, as we have placed various views before you. We want criticism and sugges-

tions. What interests you will probably interest others. We are devoting our time and efforts to the study of this new subject largely because we think it is the right thing to do. We believe that the big medical family should solve its own practical problems and not be dependent upon those who have something for sale to teach us how to manage our affairs, and we believe that you have sufficient brains to do it, if they can be interested. What do you think of it?

Address all communications to Dr. Chas. A. Bahn, 1551 Canal St.



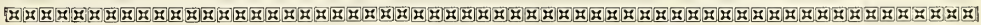
## The Selection of a Physician

The selection of a physician for an operation or as a family doctor, is usually made with some care. We consult those who have employed physicians and are governed largely by their recommendations. But having selected a physician, we follow his advice. We trust him even to the extent of submitting to operations that may have serious results.

The point is, we trust **THE MAN WHO KNOWS.**

Now, doctor, the institutions and the firms advertised in this Journal were carefully investigated before their announcements were printed here. The medical products were submitted to laboratory tests before they were accepted by the Council on Pharmacy and Chemistry.

On the same principle that patients trust you about matters with which you are informed, so your publishers urge you to trust their judgment and buy goods from the advertisers who are admitted to these pages. Other considerations being equal, you should give your advertisers **PREFERENCE** because you know they are believed to be trustworthy. Don't speculate or experiment! Trust the **APPROVED** firms and goods!



## NEWS AND COMMENT

*Lucien A. Ledoux, M. D., Department Editor*

"Every man owes some of his time to the up-building of the profession to which he belongs."  
—Theodore Roosevelt.

### LOUISIANA STATE MEDICAL SOCIETY

The forty-sixth annual meeting of the Society was one of the best in its history. An excellent scientific program interposed with suitable entertainment furnished those in attendance with an enjoyable and profitable visit. The total registration was 592.

Dr. H. E. Bernadas, General Chairman, and his sub-chairman and Committees deserve full credit for the splendid manner in which the Convention was entertained. The House of Delegates under the capable leadership of Dr. Leon Menville functioned smoothly and efficiently, and allowed its members ample time to attend the Scientific Session. The Secretary-Treasurer Dr. P. T. Talbot saw to it that the meeting went over according to schedule, and as usual was most effective.

Monroe was chosen as the next meeting place. The following officers were elected:

President, Dr. E. M. Ellis, Crowley; President-Elect, Dr. S. M. Blackshear, New Orleans; First Vice-President, Dr. F. J. Chalaron, New Orleans; Second Vice-President, Dr. J. A. White, Alexandria; Third Vice-President, Dr. L. A. Crawford, Patterson; Chairman House of Delegates, Dr. L. J. Menville, New Orleans; Secretary-Treasurer, Dr. P. T. Talbot, New Orleans; Past President, Dr. C. V. Unsworth, New Orleans. Councilors, First District, Dr. H. E. Bernadas, New Orleans; Second District, Dr. H. W. Kostmayer, New Orleans; Third District, Dr. F. T. Gouaux, Lockport; Fourth District, Dr. A. A. Herold, Shreveport; Fifth District, Dr. F. C. Bennett, Monroe; Sixth District, Dr. C. A. Weiss, Baton Rouge; Seventh District, Dr. V. A. Miller, Lake Arthur; Eighth District, Dr. S. J. Couvillon, Moreauxville.

Delegates from the Louisiana State Medical Society to the American Medical Association Meeting at Atlantic City: Dr. W. H. Seemann and Dr. S. M. Blackshear. Dr. Paul J. Gelpi and Dr. Lester Williams, Alternates.

### MISSISSIPPI STATE MEDICAL ASSOCIATION MEETING

The fifty-eighth annual meeting of Mississippi State Medical Association held at Biloxi was brought to a close with the election of Dr. G. S. Bryan of Amory as President, and the selection of Jackson as the next meeting place. The other officers elected are:

Dr. F. G. Riley, Meridian and Dr. C. N. Rington, Brookhaven, vice-presidents; T. M. Dye, Clarksdale, Secretary; J. N. Buchanan, Meridian, treasurer; S. W. Johnston, Vicksburg, delegate to the American Medical Association.

The New Orleans Medical and Surgical Journal was again selected as the official organ of the Mississippi State Medical Association.

The following Louisiana physicians attended the recent Mississippi State Medical Association Meeting held at Biloxi:

Drs. Oscar Dowling, H. W. E. Walther, H. B. Gessner, J. B. Elliott, P. T. Talbot, and C. Jeff Miller. Dr. J. B. Elliott of New Orleans was the Annual Orator.

### EIGHTH CONGRESSIONAL DISTRICT

Amid the picturesque pine trees and hills of the scenic Red River valley, another domain forming the original territory of Louisiana, right opposite the "hub city" of Louisiana-Alexandria, virtually in the little city of Pineville, La., amid a multitude of modern structures, wherein are kept numberless poor unfortunate men, women and children of all colors, creed and descriptions, victims of dementia and feeble-mindedness, is a plant so well kept and with a discipline unsurpassed by any institution of its kind south of the Ohio river—a credit to the nation. The members of the Rapides Parish and Eighth District Medical Societies, their wives and lady escorts, gathered in the spacious assembly hall of the Central Louisiana State Hospital, decorated and illuminated with all the splendor and glory of May time Monday evening, May 4th, 1925, as guests of Dr. John Newton Thomas, superintendent of this splendid institution.

Besides the many medical men and their wives from various sections of the district in attendance, many statesmen and prominent physicians of the state were present—the following being the special guests of Dr. and Mrs. Thomas: Ex-Governor and Mrs. J. Y. Sanders, Dr. and Mrs. T. J. Perkins of the East Louisiana State Hospital, Dr. and Mrs. R. G. McC. Carruth of New Roads, Dr. and Mrs. S. J. Couvillon of Moreauxville, Captain Teale of the Hospital Administrative Board, residing at Colfax.

The following valuable scientific program was rendered by the Superintendent, Dr. Jno. N. Thomas and his staff:

1. "The Relation of a State Hospital for the Insane to the People of the State," by Dr. J. N. Thomas.

2. "Dementia Praecox and Manie Depressive Psychosis," by Dr. T. C. Cooper.

3. "General Paralysis of the Insane," by Dr. R. H. Foster.

4. "The State Care of Mentally Deficient," by Dr. D. H. Keller.

5. "Paranoia and Psychopathic Personality," by Dr. Robert H. Bryant.

The paper of Dr. Thomas proved to have been "A chef-d'oeuvre," and was well discussed and complimented. The papers of the staff were all well received and were all accompanied by illustrations of a series of cases dealing with each subject as presented by the various papers read.

The occasion was the very best joint meeting of the Rapides Parish and District societies. A delicious luncheon was served following the program, under the auspices of Dr. and Mrs. Thomas, to whom flows of thanks were tendered by all present for so splendid a reception.

## FOURTH DISTRICT MEDICAL SOCIETY

The regular semi-annual meeting of the Fourth District Medical Society was held at the Shreveport Charity Hospital on Tuesday, May 19, beginning at 6 p. m. In the absence of the President, Dr. C. M. Baker, the meeting was called to order by the First Vice-President, Dr. E. L. Sanderson, of Shreveport, who welcomed the visitors on behalf of the Shreveport Medical Society.

After the reading of the minutes papers were read by Dr. J. B. Benton, of Minden, on Cystitis, by Dr. S. W. Boyce, Shreveport, on Pyelitis, and by Dr. D. L. Kerlin, Shreveport, on Dermum's Method of Treating Neuro-Syphilis, with report of cases.

At eight o'clock dinner was served by the Charity Hospital after which the balance of the program was carried out as follows, with Vice-President Crowe in the chair: Communicable Diseases, by Dr. A. G. Heath, of Shreveport; Some Conditions of the Kidney and Ureter, by Dr. J. R. Stamper, of Shreveport; Presentation of a Complicated Case by Dr. T. J. Fleming, of Shreveport, and Remarks and Report by Councillor Dr. A. A. Herold.

The meeting was well attended, about 100 members being present and promises made of a better meeting in the fall.

## WASHINGTON PARISH MEDICAL SOCIETY

On Thursday evening, April 30th, 1925, from 8 p. m. to 11 p. m., in the dining room of the Pine Tree Inn, Bogalusa, La., the Washington Parish Medical Society held its monthly meeting for April.

The program for this meeting was made up of two papers as follows:

"Asthma with Report of Case," by Dr. J. H. Slaughter. Discussion opened by Drs. Thompson and Pierce.

"Pure Water a Factor in Health," by Dr. F. M. Smith. Discussion opened by Drs. Sanders and Brock.

An enjoyable social hour in the form of a luncheon was spent, before the meeting. These meetings are attracting much interest and are very well attended.

## ST. TAMMANY PARISH MEDICAL SOCIETY

At a meeting of the St. Tammany Parish Medical Society held on April 10, 1925, the following resolution was unanimously adopted:

Whereas, it has pleased the All-wise Providence to call from his labors our friend and co-worker, Dr. Bascom Beauregard Warren,

Therefore, be it resolved, That we, the St. Tammany Parish Medical Society, in regular session assembled, deeply regret that we have to chronicle the loss of so valued and able a member of our society and of the medical fraternity, and that we desire to extend our heartfelt sympathy to the bereaved wife and daughters on account of their loss.

Be it further resolved, That a copy of this resolution be sent to the St. Tammany Farmer and the New Orleans Medical and Surgical Journal for publication, and to Mrs. B. B. Warren.

Dr. F. F. Young, Dr. H. D. Bulloch, Dr. A. G. Maylie, Committee on Necrology.

## MONTHLY MEETINGS IN NEW ORLEANS

The Medical Staff meetings of Charity Hospital are held on the third Tuesday of each month, and the Surgical Staff meetings are held on the third Wednesday of each month in the Reception Room at 8 p.m.

The Eye, Ear, Nose and Throat Hospital meetings are held on the first Monday of each month in the Library at 8 p.m.

The Eye, Ear, Nose and Throat Club meetings are held on the third Thursday of every month in the office of the Orleans Parish Medical Society at 8 p.m.

Hotel Dieu meetings are held on the third Monday of each month in the Nurses' Class Room at 8 p.m.

Mercy Hospital meetings are held on the third Friday of each month at 8 p.m.

Presbyterian Hospital meetings are held on the last Thursday of each month at 8 p.m. in the Out Clinic Building.

Touro Infirmary meetings are held on the third Wednesday of each month at 8 p.m. in the Staff Assembly Room.

New Orleans Gynecological and Obstetrical Society meets the second Thursday of every month at 8 p.m.

The Louisiana State Board of Health recently passed two resolutions, one commending and reiterating the position of the American Medical Association regarding the ambulatory treatment of drug addicts, which was disapproved; the other commending the activity of the President, Dr. Oscar Dowling, in clearing up the Narcotic Law Abuses in Shreveport.

## NEW APPOINTMENTS

The following are the new members of the Louisiana State Board of Health:

Dr. Fred Ratzburg of Shreveport, dentist; Mrs. L. C. McVoy, Baton Rouge, educator; Dr. T. T. Tarlton (vice-president) of Grand Coteau, physician; Dr. M. P. Boebinger, New Orleans, physician; Mr. T. J. Labbe, St. Martinsville, druggist; Dr. T. E. Wright, Monroe, physician; Dr. E. S. Mathews, Bunkie, physician.

Those who have been appointed to positions are: Dr. E. S. Kelly, Food and Drug Commissioner; Dr. J. E. Doussan, State Registrar Vital Statistics; vice, Dr. J. G. Dempsey; Mr. W. H. Hankins, Oil Supervisor.

## DIED

Dr. Samuel M. D. Clark, at New Orleans, May 1st, 1925.

Dr. S. F. Braud, at New Orleans, May 18th, 1925. A graduate of Tulane University and a member of the Orleans Parish Medical Society and Louisiana State Medical Society.

Dr. Paul J. Gelpi and Dr. J. M. Batchelor have been appointed members of the City Board of Health of New Orleans.

The medical personnel of the New Health Board of the City of New Orleans is as follows: Dr. W. H. Robin, Supt., Dr. F. R. Gomila, Secretary; Drs. P. L. Querens, T. F. Kirn, J. Chretien, J. L. Stulb, F. J. Kinberger, A. L. Metz., and W. H. Seemann.

The Hotel Dieu Training School of Nursing held its Graduating Exercise Tuesday, May 12th, at seven-thirty p. m., on the Hotel Dieu Roof Garden.

Twenty-eight nurses were graduated. The principal speakers of the evening were Dr. C. V. Unsworth, chairman; Rev. J. L. O'Regan, Judge W. H. Byrnes and Dr. Ernest Lewis. The music was rendered by the Hotel Dieu Glee Club.

#### DR. ALDO CASTELLANI

A recent distinguished visitor in New Orleans was Dr. Aldo Castellani, Professor in the London School of Tropical Medicine, and world famous expert on Tropical Diseases.

During his stay, he was the guest of the Orleans Parish Medical Society at one of its regular meetings; conducted a Clinic on Tropical Diseases at the Charity Hospital which was largely attended, and under the auspices of the Medical Faculty of Tulane University, addressed the local medical profession on "Certain Diseases of Tropical American" at a special meeting.

He was shown over the city and his attention directed to the splendid medical facilities here. In commenting on his visit, he said in part—"The Medical School of Tulane University is one of the finest institutions of its kind, not only in this country, but in the world—I can speak of the Charity Hospital only with words of admiration. The way that institution is run is excellent, and I have seen quite a few Hospitals in the World. I saw the United States Marine Hospital and the Hotel Dieu. They are both fine institutions. New Orleans ranks high as a medical center. I find it on the same plane as London, Paris, New York and Baltimore in this respect."

Louisiana was represented at the recent Annual Meeting of the Texas State Medical Association held in Austin, by the following: Drs. R. C. Lynch and Lucien LeDoux of New Orleans; Drs. Oscar Dowling and S. C. Barrow of Shreveport.

They took part in the Scientific Program and Dr. Lynch in addition appeared before the San Antonio Medical Society. Dr. S. C. Barrow was the fraternal delegate from Louisiana.

A Post-Graduate course, under the auspices of the Faculty of the School of Medicine of Strassburg, in Venereal and Diseases of the Skin, will be given beginning September 12th to November 7th, inclusive.

The course will be under the immediate direction of Prof. L. M. Pautrier, assisted by a very competent staff. The histology, bacteriology, pathology, and clinical aspects, both of diagnosis and treatment, will be thoroughly reviewed. Matriculation fee 200 francs.

#### NEW YORK CITY TO HAVE MOTOR TOURISTS' CAMP

Automobile tourists will be gratified to know that at last New York City has a motorists camp.

Twenty-three thousand babies born in American Cities, studied through their first year or as much of the first year as the infant survived, furnished the data for a comprehensive analysis

of infant mortality in this country made public today by the Children's Bureau of the U. S. Department of Labor.

Expected to form the basis for further effort to reduce infant mortality in the United States, and especially the mortality during the first month of life, this report is considered one of the most important yet issued by the Children's cate that there are annually 187,000 deaths un-Bureau. Latest figures, it is pointed out, indicate that there are annually 187,000 deaths under 1 year age in the United States, 98,000 of them occurring during the first month.

At the Ninth Congress of American Physicians and Surgeons, held in Washington in May, 1913, the American Gynecological Society presented to the other branches of the Congress a resolution requesting the appointment of two or more delegates to co-operate in forming a national organization to conduct a concerted educational effort for the prevention and cure of cancer.

A plan has recently gone into effect at the Massachusetts General Hospital, Boston, whereby the facilities of that institution are to be put to the fullest possible use in the diagnosis and treatment of cancer and other tumors.

In the death of Dr. LeRoy Broun, at his home in New York, April 22nd, the cause of cancer control lost a strong champion and the American Society for the Control of Cancer a devoted and wise member.

#### REUNION AND DINNER OF THE MEDICAL OFFICERS OF THE WORLD WAR

An attractive feature of the Annual Meeting of the American Medical Association at Atlantic City will be the reunion of the Medical men who served their country in the Army and Navy during the World War, to renew the memories, friendships and associations of those eventful days.

#### PUBLICATIONS RECEIVED

P. Blakiston's Son & Co., Philadelphia: "A Compend of Gynecology," by Wm. Hughes Wells, M. D., fifth edition, revised and enlarged by William Benson Harer, M. D. "Matthes' Differential Diagnosis," by I. W. Held, M. D. and M. H. Gross, M. D.

Paul B. Hoeber, Inc., New York: "Medical and Surgical Report of The Roosevelt Hospital, New York." "Clinical Features of Heart Disease," by Leroy Crummer, M. D. "Recovery Record for Use in Tuberculosis," by Gerald B. Webb, M. D. and Charles T. Ryder, M. D.

H. K. Lewis & Co., Ltd., London: "The Advance of Orthopaedic Surgery," by A. H. Tubby, C. B., C. M. G.

#### REPRINTS

"Gas Cysts of the Intestine; with Report of Three Cases," by H. W. Mills, M. R. C. S., Eng., L. R. C. P., Lond., F. A. C. S. "The Principles Governing the Distribution of Physicians and Some Corollaries Thereof," by William Allen Pusey. "A Diet for Peptic Ulcer," by A. Altshuler, M. D.

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V. H. FUCHS, M. D., Consultant, Ear,  
Nose and Throat  
M. F. MEYER, M. D., Eye, Ear, Nose  
and Throat

A. SMITH, D. D. S., Dentistry  
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